

SERVICE MANUAL

COMPACT DISC STEREO
CASSETTE RECEIVER

BASIC TAPE MECHANISM : ZZM-3 PR1NM
BASIC CD MECHANISM : 6ZG-1 ZRDM

SYSTEM	CD CASSEIVER	SPEAKER	REMOTE CONTROLLER	STEREO TURNABLE
Z-L500 (LH)	CX-ZL500	SX-WZL500	RC-ZAS02	—
Z-L500 (U)				PX-E860

- This Service Manual is the "Revision Publishing" and replaces "Simple Manual" Z-L500 (LH, U), (S/M Code No. 09-99C-424-0T1).
- If requiring information about the CD mechanism, see Service Manual of 6ZG-1, (S/M Code No. 09-001-338-7N2).
- If requiring information about the Stereo Turntable, see Service Manual of PX-E860 (U), (S/M Code No. 09-993-322-0R1).

SPECIFICATIONS

<FM tuner section>

Tuning range	87.5 MHz to 108 MHz
Usable sensitivity (IHF)	13.2 dBf
Antenna terminals	75 ohms (unbalanced)

<AM tuner section>

Tuning range	530 kHz to 1710 kHz (10 kHz step) 531 kHz to 1602 kHz (9 kHz step)
Usable sensitivity	350 μ V/m
Antenna	Loop antenna

<Amplifier section>

Mid-high frequency amplifier	
Power output	U : 25 W + 25 W (200 Hz - 20 kHz, T.H.D. less than 1 %, 8 ohms) LH : Rated 20 W + 20 W (1 kHz, T.H.D. 1 %, 8 ohms) Reference : 25 W + 25 W (8 ohms, T.H.D. 10 %, 1 kHz)
Total harmonic distortion	0.15 % (15 W, 1 kHz, 8 ohms)

Total harmonic distortion 0.15 % (15 W, 1 kHz, 8 ohms)

Low frequency amplifier
Power output U : 75 W + 75 W (50 Hz - 200 Hz,
T.H.D. less than 1 %, 6 ohms)
LH : Rated 60 W + 60 W (6 ohms,
T.H.D. 1 %, 75 Hz)
Reference : 75 W + 75 W (6 ohms,
T.H.D. 10 %, 75 Hz)

Total harmonic distortion	0.15 % (45 W, 75 Hz, 6 ohms)
Inputs	VIDEO/AUX/PHONO IN : 500 mV
Outputs	CD DIGITAL OUT (OPTICAL) SPEAKERS HIGH FREQ : accept speakers of 8 ohms or more SPEAKERS LOW FREQ : accept speakers of 6 ohms or more PHONES (stereo jack) : accepts headphones of 32 ohms or more

<Cassette deck section>

Track format	4 tracks, 2 channels stereo
Frequency response	50 Hz – 12500 Hz
Recording system	AC bias
Heads	Deck 1 : Playback head x 1 Deck 2 : Recording/Playback head x 1, erase head x 1

<Compact disc player section>

Laser	Semiconductor laser ($\lambda = 780 \text{ nm}$)
D-A converter	1 bit dual
Signal-to-noise ratio	85 dB (1 kHz, 0 dB)
Harmonic distortion	0.05 % (1 kHz, 0 dB)
Wow and flutter	Unmeasurable

<Speaker system SX-WZL500>

Cabinet type	3 way, built-in subwoofer
Speakers	Subwoofer : 220 mm (8 ³ / ₄ in.) cone type Full range : 120 mm (4 ³ / ₄ in.) cone type Super tweeter : 20 mm (1 ³ / ₁₆ in.) ceramic type
Impedance	6 ohms/8 ohms
Output sound pressure level	89 dB/W/m
Dimensions (W x H x D)	U : 260 x 495 x 261 mm (10 ¹ / ₄ x 19 ¹ / ₂ x 10 ³ / ₈ in.) LH : 260 x 495 x 253 mm (10 ¹ / ₄ x 19 ¹ / ₂ x 10 in.)
Weight	5.8 kg (12 lbs. 14 oz.)

Impedance 6 ohms/8 ohms

Output sound pressure level	89 dB/W/m
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Dimensions (W x H x D) U : 260 x 495 x 261 mm
(10¹/₄ x 19¹/₂ x 10³/₈ in.)
LH : 260 x 495 x 253 mm
(10¹/₄ x 19¹/₂ x 10 in.)

Weight 5.8 kg (12 lbs. 14 oz.)

<General>

Power requirements U : 120 V AC, 60 Hz
LH : 120 V/220 - 230 V/240 V AC
(switchable), 50/60 Hz

Power consumption U : 135 W
LH : 150 W

Dimensions of main unit
(W x H x D)
360 x 395.3 x 385.1 mm
(14¹/₄ x 15⁵/₈ x 15¹/₄ in.)

(W x H x D)	(14 7/8 x 15 7/8 x
Weight of main unit	10.9 kg (24 lb.)

- Design and specifications are subject to change without notice.

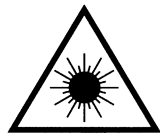
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PROTECTION OF EYES FROM LASER BEAM DURING SERVICING

This set employs laser. Therefore, be sure to follow carefully the instructions below when servicing.

WARNING!!

WHEN SERVICING, DO NOT APPROACH THE LASER EXIT WITH THE EYE TOO CLOSELY. IN CASE IT IS NECESSARY TO CONFIRM LASER BEAM EMISSION. BE SURE TO OBSERVE FROM A DISTANCE OF MORE THAN 30cm FROM THE SURFACE OF THE OBJECTIVE LENS ON THE OPTICAL PICK-UP BLOCK.



- Caution: Invisible laser radiation when open and interlocks defeated avoid exposure to beam.
- Advarsel: Usynlig laserstråling ved åbning, når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling.

VAROITUS!

Laiteen Käyttäminen muulla kuin tässä käyttöohjeessa mainitulla tavalla saattaa altistaa käyttäjän turvallisuusluokan 1 ylittävälle näkymättömälle lasersäteilylle.

WARNING!

Om apparaten används på annat sätt än vad som specificeras i denna bruksanvisning, kan användaren utsättas för osynlig laserstrålning, som överskrider gränsen för laserklass 1.

CAUTION

Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

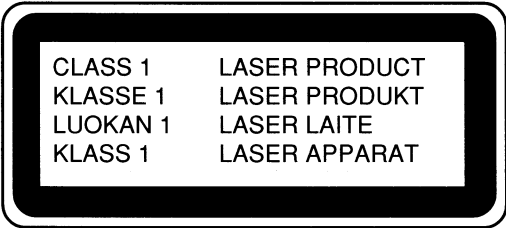
ATTENTION

L'utilisation de commandes, réglages ou procédures autres que ceux spécifiés peut entraîner une dangereuse exposition aux radiations.

ADVARSEL

Usynlig laserstråling ved åbning, når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling.

This Compact Disc player is classified as a CLASS 1 LASER product.
The CLASS 1 LASER PRODUCT label is located on the rear exterior.

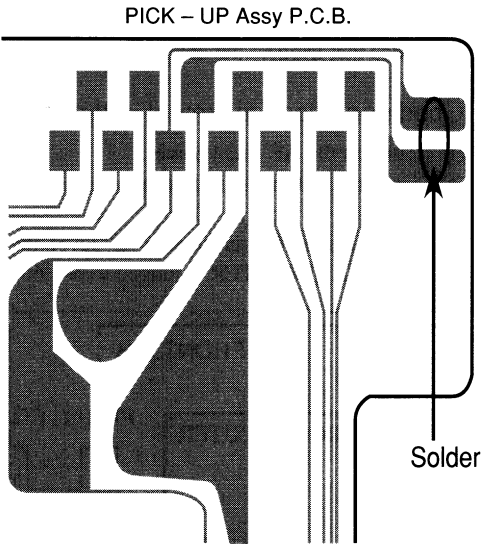


Precaution to replace Optical block

(KSS-213F)

Body or clothes electrostatic potential could ruin laser diode in the optical block. Be sure ground body and workbench, and use care the clothes do not touch the diode.

- 1) After the connection, remove solder shown in the right figure.



NOTE ON BEFORE STARTING REPAIR

1. Forced discharge of electrolytic capacitor of power supply block

When repair is going to be attempted in the set that uses relay circuit in the power supply block, electric potential is kept charged across the electrolytic capacitors (C101, 102) even though AC power cord is removed. If repair is attempted in this condition, secondary defect can occur.

In order to prevent the secondary trouble, perform the following measures before starting repair work.

Discharge procedure

- ① Remove the AC power cord.
- ② Connect a discharging resistor at an end of lead wire that has clips at both ends. Connect the other end of the lead wire to metal chassis.
- ③ Contact the other end of the discharging resistor to the positive (+) side (+VH) of C101. (For two seconds)
- ④ Contact the same end of the discharging resistor as step ③ to the negative (-) side (-VH) of C102 in the same way. (For two seconds)
- ⑤ Check that voltage across C101 and C102 has decreased to 1 V or less using a multimeter or an oscilloscope.

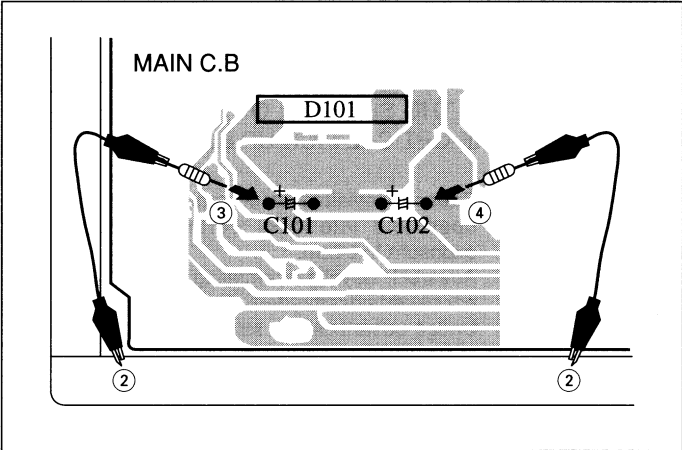


Fig-1

Select a discharging resistor referring to the following table.

Charging voltage (V) (C101, 102)	Discharging resistor ()	Rated power (W)	Parts number
25-48	100	3	87-A00-247-090
49-140	220	5	87-A00-232-090

Note: The reference numbers (C101, C102) of the electrolytic capacitors can change depending on the models. Be sure to check the reference numbers of the charging capacitor on schematic diagram before starting the discharging work.

2. Check items before exchanging the MICROCOMPUTER

Be sure to check the following items before exchanging the MICROCOMPUTER. Exchange the MICROCOMPUTER after confirming that the MICROCOMPUTER is surely defective.

2-1. Regarding the HOLD terminal of the MICROCOMPUTER

When the HOLD terminal (INPUT) of the MICROCOMPUTER is “H”, the MICROCOMPUTER is judged to be operating correctly. When this terminal is “L”, the main power cannot be turned on. Therefore, be sure to check the terminal voltage of the HOLD terminal before exchange.

When the MICROCOMPUTER is not defective, the HOLD terminal can also go “L” when the POWER AMPLIFIER has any abnormalities that triggers the abnormality detection circuit on the MAIN C. B. that sets the HOLD terminal to “L”.

- Good or no good judgment of the MICROCOMPUTER
 - ① Turn on the AC main power.
 - ② Confirm that the main power is turned on and the HOLD terminal of the MICROCOMPUTER keeps the “H” level or not.
 - ③ When the HOLD terminal is “L” level, the abnormality detection circuit is judged to be working correctly and the MICROCOMPUTER is judged to be good.

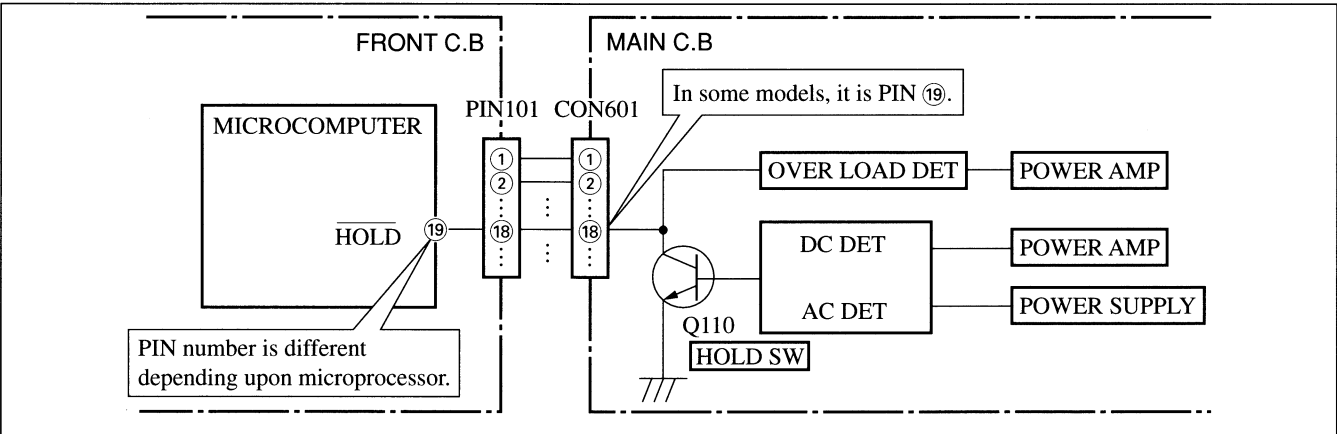


Fig-2-1

In such a case, check also if the POWER AMPLIFIER circuit or power supply circuit has any abnormalities or not.

2-2. Regarding reset

There are cases that the machine does not work correctly because the MICROCOMPUTER is not reset even though the AC power cord is re-inserted, or the software reset (pressing the STOP key + POWER key) is performed. When the above described phenomenon occurs, it can lead to wrong judgment as if the MICROCOMPUTER is defective and to exchange the MICROCOMPUTER. In such a case, perform the forced-reset by the following procedure and check good or no good of the MICROCOMPUTER.

- ① Remove the AC power cord.

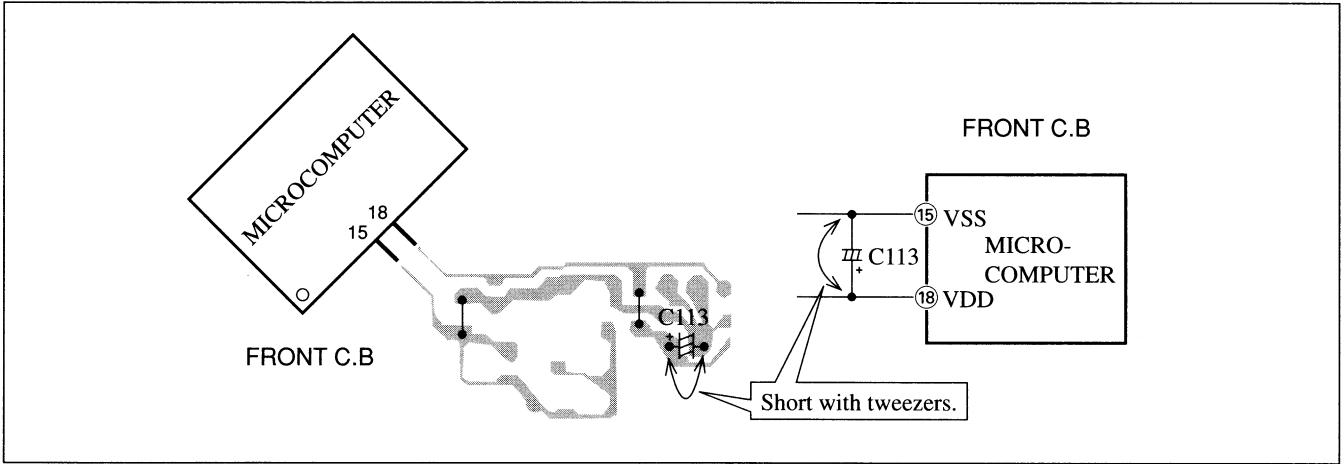


Fig-2-2

- ② Short both ends of the electrolytic capacitor C113 that is connected to VDD of the MICROCOMPUTER with tweezers.
- ③ Connect the AC power cord again. If the MICROCOMPUTER returns to the normal operation, the MICROCOMPUTER is good.

Note: The reference number or MICROCOMPUTER pin number of transistor (Q110) and electrolytic capacitor (C113) can change depending on the models. Be sure to check the reference numbers on schematic diagram before starting the discharging work.

2-3. Confirmation of soldering state of MICROCOMPUTER

Check the soldering state of the MICROCOMPUTER in addition to the above described procedures. Be sure to exchange the MICROCOMPUTER after surely confirming that the trouble is not caused by poor soldering but the MICROCOMPUTER itself.

ELECTRICAL MAIN PARTS LIST

If can't understand for Description please kindly refer to " REFERENCE NAME LIST ".

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION	REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
IC				C15	87-012-368-080		CHIP CAPACITOR,0.1-50
				C16	87-012-368-080		CHIP CAPACITOR,0.1-50
	8A-MA5-656-010		C-IC,LC876580W-5P44	C17	87-012-368-080		CHIP CAPACITOR,0.1-50
	87-A21-417-010		IC,STK490-310	C18	87-012-368-080		CHIP CAPACITOR,0.1-50
	87-A21-396-010		IC,STK490-040	C19	87-010-917-000		CAP,E 3300-50<LH>
	87-A21-021-040		C-IC,BU2099FV				
	87-017-888-080		C-IC,NJM14558MD	C19	87-016-520-000		CAP,E 3300-65 M SMG<U>
				C20	87-010-917-000		CAP,E 3300-50<LH>
	87-A21-577-040		C-IC,M61506FP	C20	87-016-520-000		CAP,E 3300-65 M SMG<U>
	87-A21-482-010		IC,RPM 6938-H4	C21	87-A10-520-000		CAP,E 3300-35 SME
	87-A21-401-040		C-IC,M61503FP	C22	87-A10-520-000		CAP,E 3300-35 SME
	87-A21-415-010		IC,LA1843				
	87-070-127-110		IC,LC72131 D	C23	87-A10-520-000		CAP,E 3300-35 M SME
				C24	87-A10-520-000		CAP,E 3300-35 M SME
	87-A21-269-010		IC,EW732	C25	87-010-247-080		CAP, ELECT 100-50V
				C25	87-010-408-080		CAP, ELECT 47-50 M 11L SME<U>
				C26	87-010-247-080		CAP, ELECT 100-50V
TRANSISTOR				C30	87-010-430-080		CAP, ELECT 100-63V
	87-026-609-080		TR,KTA1266GR	C31	87-010-263-080		CAP, ELECT 100-10V
	89-213-702-010		TR,2SB1370 (1.8W)	C32	87-010-197-080		CAP, CHIP 0.01-25 KB C2012
	87-026-610-080		TR,KTC3198GR	C33	87-010-263-080		CAP, ELECT 100-10V<U>
	87-A30-076-080		C-TR,2SC3052F	C34	87-010-247-080		CAP, ELECT 100-50V
	87-A30-075-080		C-TR,2SA1235F				
				C35	87-010-380-080		CAP, ELECT 47-16V
	87-A30-257-080		C-TR,2SD1306E	C36	87-010-381-080		CAP, ELECT 330-16V
	87-026-245-080		TR,DTC114ES	C38	87-010-197-080		CAP, CHIP 0.01-25 KB C2012
	87-A30-198-080		TR,KTC3199GR	C60	87-010-403-080		CAP, ELECT 3.3-50 M 11L SME
	87-A30-484-080		C-TR,KRA102S	C61	87-010-260-080		CAP, ELECT 47-25V
	87-A30-107-070		C-TR,CMBT5401				
				C101	87-010-178-080		CHIP CAP 1000P-50 KB C2012
	87-A30-106-040		C-TR,CMBT5551	C102	87-010-178-080		CHIP CAP 1000P-50 KB C2012
	87-A30-087-080		C-FET,2SK2158	C103	87-010-405-080		CAP, ELECT 10-50V
	87-A30-468-080		C-TR,KRC102S-RTK	C104	87-010-405-080		CAP, ELECT 10-50V
	87-A30-091-080		FET,2SJ460	C107	87-010-404-080		CAP, ELECT 4.7-50V
	87-A30-090-080		FET,2SK2541				
				C108	87-010-404-080		CAP, ELECT 4.7-50V
	87-A30-104-080		C-TR,RT1N 144C	C111	87-010-405-080		CAP, ELECT 10-50V
	87-A30-329-080		TR,CD1585BC	C112	87-010-405-080		CAP, ELECT 10-50V
	87-A30-318-080		TR,CSA952K	C113	87-010-866-080		CAP, ELECT 10-63 M VX
	89-333-317-080		TR,2SC3331 (T/U)	C114	87-010-866-080		CAP, ELECT 10-63 M VX
	87-A30-269-040		C-FET,2SJ461-T1				
				C119	87-010-197-080		CAP, CHIP 0.01-25 KB C2012
	89-327-143-080		C-TR,2SC27140(0.1W)	C120	87-010-197-080		CAP, CHIP 0.01-25 KB C2012
	87-A30-489-080		C-TR,KRA 107S	C123	87-010-176-080		C-CAP,S 680P-50 SL
	87-A30-234-080		TR,CSC4115BC	C124	87-010-176-080		C-CAP,S 680P-50 SL
				C125	87-012-368-080		C-CAP,S 0.1-50 ZF
DIODE				C126	87-012-368-080		C-CAP,S 0.1-50 ZF
				C127	87-012-368-080		CHIP CAPACITOR,0.1-50
	87-A40-393-090		DIODE,1N5402GW(F20)	C128	87-012-368-080		CHIP CAPACITOR,0.1-50
	87-020-465-080		DIODE,1SS133 (110MA)	C129	87-010-191-080		C-CAP,S 0.015-50 ZF GRM
	87-017-447-010		DIODE,GBU 4DL-6419	C130	87-010-191-080		C-CAP,S 0.015-50 ZF GRM
	87-A40-455-080		DIODE,RL203 GW				
	87-070-274-080		DIODE,1N4003 SEM	C133	87-010-186-080		CAP,CHIP 4700P-50 KB C2012
				C134	87-010-404-080		CAP, ELECT 4.7-50V
	87-A40-780-080		ZENER,UZ33BSD	C140	87-010-186-080		C-CAP,S 4700P-50 KB C2012
	87-A40-736-080		DIODE,1N4148M(SEM)	C160	87-010-196-080		CHIP CAPACITOR,0.1-25
	87-A40-764-080		ZENER,UZ10BSC	C203	87-010-183-080		C-CAP,S 2700P-50 KB GRM
	87-A40-553-080		DIODE,1N4003 LES				
	87-A40-313-080		C-DIODE,MC 2840	C204	87-010-183-080		C-CAP,S 2700P-50 KB GRM
				C205	87-010-176-080		C-CAP,S 680P-50 J SL
	87-A40-270-080		C-DIODE,MC2838	C206	87-010-176-080		C-CAP,S 680P-50 J SL
	87-A40-269-080		C-DIODE,MC2836	C209	87-010-403-080		CAP, ELECT 3.3-50V
	87-A40-768-080		ZENER, UZ16BSA	C210	87-010-403-080		CAP, ELECT 3.3-50V
	87-017-154-080		ZENER,HZS6C3L				
	87-A40-751-080		ZENER,UZ6.2BSB	C211	87-010-184-080		CHIP CAPACITOR 3300P-50
				C212	87-010-184-080		CHIP CAPACITOR 3300P-50
	87-A40-739-080		ZENER,UZ2.7BSA	C213	87-010-403-080		CAP, ELECT 3.3-50V
	87-017-149-080		ZENER,HZS6A2L	C214	87-010-403-080		CAP, ELECT 3.3-50V
				C217	87-010-405-080		CAP, ELECT 10-50V
MAIN C.B				C218	87-010-405-080		CAP, ELECT 10-50V
				C220	87-010-405-080		CAP, ELECT 10-50V
C3	87-012-368-080		CHIP CAPACITOR,0.1-50	C223	87-010-190-080		CAP, CHIP 0.01-50 ZF C2012
C4	87-012-368-080		CHIP CAPACITOR,0.1-50	C224	87-010-190-080		CAP, CHIP 0.01-50 ZF C2012
C5	87-012-368-080		CHIP CAPACITOR,0.1-50	C228	87-010-405-080		CAP, ELECT 10-50V
C6	87-012-368-080		CHIP CAPACITOR,0.1-50				
C9	87-012-368-080		CHIP CAPACITOR,0.1-50	C229	87-010-993-080		C-CAP,S 0.056-25 B
				C230	87-010-993-080		C-CAP,S 0.056-25 B
C10	87-012-368-080		CHIP CAPACITOR,0.1-50	C231	87-010-196-080		CHIP CAPACITOR,0.1-25
C11	87-012-368-080		CHIP CAPACITOR,0.1-50	C232	87-010-196-080		CHIP CAPACITOR,0.1-25
C12	87-012-368-080		CHIP CAPACITOR,0.1-50	C233	87-010-190-080		CAP, CHIP 0.01-50

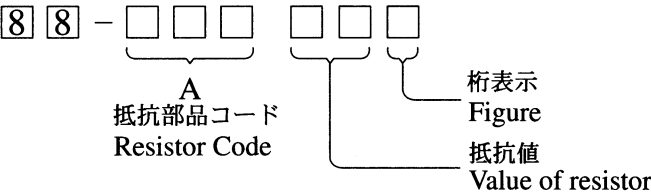
REF. NO.	PART NO.	KANRI NO.	DESCRIPTION	REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
C234	87-010-190-080		CAP, CHIP 0.01-50	C633	87-010-193-080		CHIP CAPACITOR,0.033-25
C241	87-016-081-080		C-CAP, S 0.1-16 KR GRM	C634	87-010-193-080		CHIP CAPACITOR,0.033-25
C242	87-016-081-080		C-CAP, S 0.1-16 KR GRM	C669	87-010-322-080		C-CAP,S 100P-50 CH
C301	87-010-178-080		CHIP CAP 1000P-50 KB C2012	C670	87-010-322-080		C-CAP,S 100P-50 CH
C302	87-010-178-080		CHIP CAP 1000P-50 KB C2012	C673	87-010-182-080		C-CAP,S 2200P-50 B
C303	87-010-178-080		CHIP CAP 1000P-50 KB C2012	C677	87-010-197-080		C-CAP, S 0.01-25 KB C2012
C304	87-010-178-080		CHIP CAP 1000P-50 KB C2012	C678	87-010-197-080		C-CAP, S 0.01-25 KB C2012
C307	87-010-263-080		CAP, ELECT 100-10V	C771	87-010-263-080		CAP, ELECT 100-10V
C308	87-010-263-080		CAP, ELECT 100-10V	C772	87-010-197-080		CAP, CHIP 0.01-25 KB C2012
C309	87-010-318-080		C-CAP,S 47P-50 CH	C782	87-010-197-080		CAP, CHIP 0.01-25 KB C2012
C310	87-010-318-080		C-CAP,S 47P-50 CH	C783	87-010-197-080		CAP, CHIP 0.01-25 KB C2012
C313	87-010-188-080		CAP CHIP S6800P-50 KB C2012	C784	87-010-197-080		CAP, CHIP 0.01-25 KB C2012
C314	87-010-188-080		CAP CHIP S6800P-50 KB C2012	C785	87-010-197-080		CAP, CHIP 0.01-25 KB C2012
C315	87-010-263-080		CAP, ELECT 100-10V	C786	87-010-197-080		CAP, CHIP 0.01-25 KB C2012
C317	87-010-546-080		CAP, ELECT 0.33-50V	C788	87-010-149-080		C-CAP,S 5P-50 CH
C318	87-010-546-080		CAP, ELECT 0.33-50V	C789	87-A12-052-080		C-CAP,S 0.033-25 JB
C326	87-010-198-080		CAP, CHIP 0.022-25	C790	87-A12-052-080		C-CAP,S 0.033-25 JB
C327	87-012-368-080		CHIP CAPACITOR,0.1-50	C791	87-010-196-080		CHIP CAPACITOR,0.1-25
C360	87-010-401-080		CAP, ELECT 1-50V	C792	87-010-197-080		CAP, CHIP 0.01-25 KB C2012
C399	87-012-140-080		CAP 470P-50	C793	87-010-404-080		CAP, ELECT 4.7-50V
C401	87-010-544-080		CAP, ELECT 0.1-50V	C795	87-010-197-080		CAP, CHIP 0.01-25 KB C2012
C402	87-010-544-080		CAP, ELECT 0.1-50V	C796	87-010-197-080		CAP, CHIP 0.01-25 KB C2012
C403	87-010-321-080		CHIP CAPACITOR,82P-50J CH	C797	87-010-405-080		CAP, ELECT 10-50V
C404	87-010-321-080		CHIP CAPACITOR,82P-50J CH	C798	87-010-197-080		CAP, CHIP 0.01-25 KB C2012
C405	87-010-197-080		CAP, CHIP 0.01-25 KB C2012	C799	87-010-407-080		CAP, ELECT 33-50V
C406	87-010-197-080		CAP, CHIP 0.01-25 KB C2012	C800	87-012-369-080		C-CAP,S 0.047-50F
C407	87-010-197-080		CAP, CHIP 0.01-25 KB C2012	C801	87-010-403-080		CAP, ELECT 3.3-50V
C408	87-010-197-080		CAP, CHIP 0.01-25 KB C2012	C802	87-010-194-080		CAP, CHIP 0.047-25 ZF
C409	87-010-182-080		C-CAP,S 2200P-50 B	C803	87-010-198-080		CAP, CHIP 0.022-25
C410	87-010-182-080		C-CAP,S 2200P-50 B	C804	87-010-263-080		CAP, ELECT 100-10V
C411	87-010-405-080		CAP, ELECT 10-50V	C807	87-010-400-080		CAP, ELECT 0.47-50V
C412	87-010-405-080		CAP, ELECT 10-50V	C808	87-010-401-080		CAP, ELECT 1-50V
C452	87-010-382-080		CAP, ELECT 22-25V	C809	87-010-401-080		CAP, ELECT 1-50V
C453	87-010-183-080		C-CAP,S 2700P-50 B	C810	87-010-196-080		CHIP CAPACITOR,0.1-25
C454	87-010-183-080		C-CAP,S 2700P-50 B	C814	87-010-197-080		CAP, CHIP 0.01-25 KB C2012
C455	87-010-183-080		C-CAP,S 2700P-50 B	C815	87-010-403-080		CAP, ELECT 3.3-50V
C456	87-010-197-080		CAP, CHIP 0.01-25	C816	87-010-403-080		CAP, ELECT 3.3-50V
C458	87-010-178-080		CHIP CAP 1000P-50	C821	87-010-405-080		CAP, ELECT 10-50V
C459	87-010-175-080		CAP 560P-50 J SL	C823	87-010-177-080		C-CAP,S 820P-50 SL
C460	87-016-669-080		CAP, CHIP 0.01-25	C824	87-010-405-080		CAP, ELECT 10-50
C461	87-012-158-080		C-CAP,S 390P-50 CH	C825	87-010-596-080		CAP, S 0.047-16
C462	87-012-158-080		C-CAP,S 390P-50 CH	C842	87-010-197-080		CAP, CHIP 0.01-25 KB C2012
C507	87-010-196-080		CHIP CAPACITOR,0.1-25	C844	87-010-197-080		CAP, CHIP 0.01-25 KB C2012
C518	87-010-196-080		CHIP CAPACITOR,0.1-25	C850	87-010-260-080		CAP, ELECT 47-25V
C519	87-010-404-080		CAP, ELECT 4.7-50V	C851	87-010-197-080		CAP, CHIP 0.01-25 KB C2012
C520	87-010-404-080		CAP, ELECT 4.7-50V	C852	87-010-197-080		CAP, CHIP 0.01-25 KB C2012
C521	87-010-546-080		CAP, ELECT 0.33-50V	C853	87-010-197-080		CAP, CHIP 0.01-25 KB C2012
C522	87-010-546-080		CAP, ELECT 0.33-50V	C858	87-010-196-080		CHIP CAPACITOR,0.1-25
C523	87-010-256-080		CAP, ELECT 0.68-50V	C859	87-010-196-080		CHIP CAPACITOR,0.1-25
C524	87-010-256-080		CAP, ELECT 0.68-50V	C860	87-010-197-080		CAP, CHIP 0.01-25 KB C2012
C525	87-010-545-080		CAP, ELECT 0.22-50V	C959	87-010-196-080		CHIP CAPACITOR,0.1-25
C526	87-010-545-080		CAP, ELECT 0.22-50V	C960	87-010-196-080		CHIP CAPACITOR,0.1-25
C601	87-010-179-080		CAP,CHIP S 1200P-50 KB GRM	C961	87-010-152-080		C-CAP,S 8P-50 CH
C602	87-010-179-080		CAP,CHIP S 1200P-50 KB GRM	C963	87-015-785-080		CHIP CAPACITOR, 0.1FZ-25Z
C605	87-010-179-080		CAP,CHIP S 1200P-50 KB GRM	C971	87-010-381-080		CAP, ELECT 330-16V
C606	87-010-179-080		CAP,CHIP S 1200P-50 KB GRM	C972	87-010-404-080		CAP, ELECT 4.7-50V
C609	87-010-213-080		C-CAP,S 0.015-25 B	C973	87-010-197-080		CAP, CHIP 0.01-25 KB C2012
C610	87-010-213-080		C-CAP,S 0.015-25 B	C974	87-010-197-080		CAP, CHIP 0.01-25 KB C2012
C611	87-010-545-080		CAP, ELECT 0.22-50V	C979	87-010-322-080		C-CAP,S 100P-50 CH
C612	87-010-545-080		CAP, ELECT 0.22-50V	C981	87-010-260-080		CAP, ELECT 47-25V
C613	87-010-545-080		CAP, ELECT 0.22-50V	C982	87-010-196-080		CHIP CAPACITOR,0.1-25
C614	87-010-545-080		CAP, ELECT 0.22-50V	C983	87-010-197-080		CAP, CHIP 0.01-25
C615	87-010-154-080		CAP CHIP 10P-50 D CH GRM	C984	87-010-197-080		CAP, CHIP 0.01-25
C616	87-010-385-080		CAP, ELECT 220-25V	C987	87-010-197-080		CAP, CHIP 0.01-25
C617	87-010-385-080		CAP, ELECT 220-25V	C991	87-010-312-080		C-CAP,S 15P-50 CH
C618	87-010-405-080		CAP, ELECT 10-50V	C992	87-010-312-080		C-CAP,S 15P-50 CH
C620	87-010-263-080		CAP, ELECT 100-10 M 11L SME	C993	87-010-178-080		CHIP CAP 1000P-50
C630	87-A10-201-080		CAP, S 0.33-16	C995	87-010-178-080		CHIP CAP 1000P-50
C631	87-010-185-080		C-CAP,S 3900P-50 B	C997	87-010-196-080		CHIP CAPACITOR,0.1-25
C632	87-010-185-080		C-CAP,S 3900P-50 B	C998	87-010-260-080		CAP, ELECT 47-25V

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION	REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
C999	87-A11-132-080		CAP,TC U 0.01-50 KB	C303	87-012-358-080		C-CAP,S 0.47-10 F Z
CF831	87-008-261-010		FILTER, SFE10.7MA5-A	C304	87-012-358-080		C-CAP,S 0.47-10 F Z
CF832	87-008-261-010		FILTER, SFE10.7MA5-A	C305	87-010-196-080		CHIP CAPACITOR,0.1-25
CN301	87-A60-620-010		CONN,3P V 2MM JMT	C306	87-010-196-080		CHIP CAPACITOR,0.1-25
CN351	87-A60-625-010		CONN,8P V 2MM JMT	C310	87-010-196-080		CHIP CAPACITOR,0.1-25
CN601	87-099-719-010		CONN,30P TYK-B(X)	C311	87-010-405-040		CAP,E 10-50
CN602	87-A60-131-010		CONN,6P V FE	C411	87-012-157-080		C-CAP,S 330P-50 CH
CNA1	8A-NF8-654-010		CONN ASSY,11P TID-A(480)	C412	87-010-405-040		CAP,E 10-50
FC602	88-906-321-110		FF-CABLE, 6P 1.25	C421	87-010-197-080		CAP, CHIP 0.01-25
FFE831	A8-8ZA-190-030		8ZA-1 FEUNM	C422	87-010-182-080		C-CAP,S 2200P-50 B
J201	87-A60-483-010		JACK,DIA6.3 BLK ST W/S KM	C940	87-012-145-080		CAP, CHIP S 270P-50
J203	87-A60-238-010		TERMINAL,SP 4P (MSC)	C941	87-012-145-080		CAP, CHIP S 270P-50
J205	87-A61-157-010		JACK,PIN 2P R/W/BL V(SEPA)KM	C942	87-012-145-080		CAP, CHIP S 270P-50
J602	87-A60-881-010		JACK,PIN 2P MSP 242V05 PBSN	C943	87-012-145-080		CAP, CHIP S 270P-50
J831	87-A60-202-010		TERMINAL,ANT 4P MSP-154V-02	C944	87-012-145-080		CAP, CHIP S 270P-50
L101	87-003-383-010		COIL,1UH-S	C945	87-012-145-080		CAP, CHIP S 270P-50
L102	87-003-383-010		COIL,1UH-S	C946	87-012-145-080		CAP, CHIP S 270P-50
L201	87-003-383-010		COIL,1UH-S	C947	87-012-145-080		CAP, CHIP S 270P-50
L202	87-003-383-010		COIL,1UH-S	C948	87-012-145-080		CAP, CHIP S 270P-50
L451	87-007-342-010		COIL,OSC 85K BIAS	C949	87-012-145-080		CAP, CHIP S 270P-50
L801	87-A50-540-010		COIL,FM DET(TOK)	C950	87-012-145-080		CAP, CHIP S 270P-50
L802	87-A91-551-010		FLTR,PCFJZH-450 L(TOK)	C951	87-012-145-080		CAP, CHIP S 270P-50
L811	87-005-847-080		COIL,2.2UH(CECS)	C952	87-012-145-080		CAP, CHIP S 270P-50
L832	87-005-847-080		COIL,2.2UH(CECS)	CN101	87-099-720-010		CONN,30P TYK-B(P)
L951	8A-NF8-667-010		COIL,AM PACK 4(TOK)	CN102	87-A60-162-010		CONN,14P H FE
R129	87-A00-262-080		RES,M/F 0.15-2W J	CN103	87-A60-160-010		CONN,12P H FE
R130	87-A00-262-080		RES,M/F 0.15-2W J	CN104	87-A60-159-010		CONN,11P H FE
R143	87-A00-440-050		RES,220-1/2W J RP	CN301	87-A60-156-010		CONN,8P H FE
R144	87-A00-440-050		RES,220-1/2W J RP	FC102	88-914-231-110		FF-CABLE,14P 1.25
R145	87-A00-440-050		RES,220-1/2W J RP	FC104	88-911-151-110		FF-CABLE,11P 1.25
R146	87-A00-440-050		RES,220-1/2W J RP	FL101	8A-MA5-651-010		FL,BJ746GNK
R233	87-A00-258-080		RES,M/F 0.22-1W J	L101	87-A50-333-010		COIL,OSC 9.43MHZ
R234	87-A00-258-080		RES,M/F 0.22-1W J	LED131	87-A40-317-080		LED,SLR-342VCT31 RED
R991	87-010-322-080		C-CAP, S 100P-50 J CH GRM	LED201	87-A40-496-040		LED,SLR-342PCT31 GRN
R993	87-010-322-080		C-CAP, S 100P-50 J CH GRM	LED202	87-A40-317-080		LED,SLR-342VCT31 RED
R995	87-010-322-080		C-CAP, S 100P-50 J CH GRM	LED204	87-A40-496-040		LED,SLR-342PCT31 GRN
SFR451	87-A90-432-080		SFR,30K H NVZ6TLTA	LED205	87-A40-317-080		LED,SLR-342VCT31 RED
SFR452	87-A90-432-080		SFR,30K H NVZ6TLTA	LED208	87-A40-496-040		LED,SLR-342PCT31 GRN
WH1	87-A91-179-010		HLDR,WIRE 2.5-11P	LED210	87-A40-317-080		LED,SLR-342VCT31 RED
X991	87-A70-061-010		VIB,XTAL 4.500MHZ CSA-309	LED211	87-A40-496-040		LED,SLR-342PCT31 GRN
MICON C.B				LED212	87-A40-317-080		LED,SLR-342VCT31 RED
C101	87-010-498-040		CAP,E 10-16 M 5L SRE	S401	87-A90-095-080		SW,TACT EVQ11G04M
C102	87-010-194-080		CAP, CHIP 0.047-25 Z F	S402	87-A90-095-080		SW,TACT EVQ11G04M
C103	87-010-194-080		CAP, CHIP 0.047-25 Z F	S405	87-A90-095-080		SW,TACT EVQ11G04M
C105	87-A11-242-040		CAP,E 220-10 M 5L SRM	S421	87-A91-625-010		SW,RTRY EC12E24308-30MM
C106	87-A11-242-040		CAP,E 220-10 M 5L SRM	CNTL C.B			
C107	87-010-196-080		CHIP CAPACITOR,0.1-25	C651	87-010-182-080		C-CAP,S 2200P-50 B
C111	87-A11-606-080		C-CAP,S 0.22-25 K B	C652	87-010-197-080		CAP, CHIP 0.01-25
C112	87-010-493-040		CAP,E 0.47-50 GAS	C663	87-012-156-080		C-CAP,S 220P-50 CH
C113	87-010-178-080		CHIP CAP 1000P-50	CN661	87-A60-160-010		CONN,12P H FE
C114	87-018-209-080		CAP TC U 0.1-50 ZF UP 050	FC661	88-912-151-110		FF-CABLE,12P 1.25
C116	87-010-196-080		C-CAP,S 0.1-25 ZF C2012	LED675	87-A40-317-080		LED,SLR-342VCT31 RED
C122	87-012-369-080		C-CAP,S 0.047-50F	LED676	87-A40-317-080		LED,SLR-342VCT31 RED
C123	87-010-408-040		CAP,E 47-50 SME	LED677	87-A40-317-080		LED,SLR-342VCT31 RED
C124	87-010-421-040		CAP,E 4.7-50 5L	LED678	87-A40-317-080		LED,SLR-342VCT31 RED
C125	87-010-421-040		CAP,E 4.7-50 5L	LED679	87-A40-317-080		LED,SLR-342VCT31 RED
C132	87-012-156-080		C-CAP,S 220P-50 CH	LED682	87-A40-619-040		LED,SLR-56PT-T31-W GRN
C133	87-010-316-080		C-CAP,S 33P-50 CH	LED683	87-A40-619-040		LED,SLR-56PT-T31-W GRN
C135	87-018-209-080		CAP, TCU 0.1-50	LED684	87-A40-619-040		LED,SLR-56PT-T31-W GRN
C137	87-010-313-080		CAP, CHIP 18P-50	LED685	87-A40-619-040		LED,SLR-56PT-T31-W GRN
C138	87-010-196-080		CHIP CAPACITOR,0.1-25	LED698	87-A40-619-040		LED,SLR-56PT-T31-W GRN
C188	87-010-194-080		CAP, CHIP 0.047-25	S651	87-A91-624-010		SW,RTRY EC12E1240405-20MM
C193	87-010-197-080		CAP, CHIP 0.01-25	S805	87-A90-095-080		SW,TACT EVQ11G04M
C251	87-010-196-080		CHIP CAPACITOR,0.1-25	S806	87-A90-095-080		SW,TACT EVQ11G04M
C252	87-012-156-080		C-CAP,S 220P-50 CH	S807	87-A90-095-080		SW,TACT EVQ11G04M
C253	87-010-322-080		C-CAP,S 100P-50 CH	S808	87-A90-095-080		SW,TACT EVQ11G04M
C301	87-012-358-080		C-CAP,S 0.47-10 F Z	S809	87-A90-095-080		SW,TACT EVQ11G04M
C302	87-012-158-080		C-CAP,S 390P-50 CH	S821	87-A90-095-080		SW,TACT EVQ11G04M

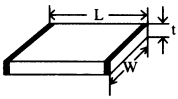
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S822	87-A90-095-080	SW,TACT	EVQ11G04M	⚠ FC1	87-033-213-080		CLAMP, FUSE PFC5000
S823	87-A90-095-080	SW,TACT	EVQ11G04M	⚠ FC2	87-033-213-080		CLAMP, FUSE PFC5000
S824	87-A90-095-080	SW,TACT	EVQ11G04M	⚠ PR101	87-026-691-080		FUSE,10A 125V 251<U>
S826	87-A90-095-080	SW,TACT	EVQ11G04M	⚠ PR101	87-026-682-080		PROTECTOR,10A 60V491<LH>
S827	87-A90-095-080	SW,TACT	EVQ11G04M	⚠ PR104	87-026-691-080		FUSE,10A 125V 251<U>
S828	87-A90-095-080	SW,TACT	EVQ11G04M	⚠ PR104	87-026-682-080		PROTECTOR,10A 60V491<LH>
S829	87-A90-095-080	SW,TACT	EVQ11G04M	⚠ PR108	87-A91-276-080		FUSE,125MA 125V F 251<U>
S830	87-A90-095-080	SW,TACT	EVQ11G04M	⚠ PT1	8A-MA5-663-010		PT,AMA-5 LH<LH>
S831	87-A90-095-080	SW,TACT	EVQ11G04M	⚠ PT1	8A-MA5-661-010		PT,AMA-5 U<U>
S842	87-A90-095-080	SW,TACT	EVQ11G04M	⚠ PT2	8A-NF8-673-010		PT,SUB ANF-8 (H)<LH>
S843	87-A90-095-080	SW,TACT	EVQ11G04M	⚠ PT2	8A-NF8-661-010		PT,SUB ANF-8 (U)<U>
S845	87-A90-095-080	SW,TACT	EVQ11G04M	⚠ RY101	87-A91-300-010		RELAY,AC 12V-ALA2PF12<LH>
S846	87-A90-095-080	SW,TACT	EVQ11G04M	⚠ RY102	87-A90-976-010		RELAY,AC12V SDT-S-112LMR<U>
S849	87-A90-095-080	SW,TACT	EVQ11G04M	⚠ S101	87-A90-165-010		SW,SL 1-2-3 SWS2301<LH>
S850	87-A90-095-080	SW,TACT	EVQ11G04M	⚠ T1	87-A60-317-010		TERMINAL, 1P MSC
S851	87-A90-095-080	SW,TACT	EVQ11G04M	⚠ T2	87-A60-317-010		TERMINAL, 1P MSC
KEY CD C.B				DECK C.B			
CN701	87-A60-156-010	CONN,8P H FE		CN1	87-099-753-010	CONN,11P H 9604	
FC701	88-908-231-110	FF-CABLE,8P 1.25		SFR1	87-024-581-010	SFR,3.3K DIA6V K0A	
S751	87-A90-095-080	SW,TACT	EVQ11G04M	SW1	87-A90-673-010	SW,MICRO ESE11SH1C	
S752	87-A90-095-080	SW,TACT	EVQ11G04M	SW2	87-A91-500-010	SW,MICRO MPU11470MLB0	
S753	87-A90-095-080	SW,TACT	EVQ11G04M	SW3	87-A91-500-010	SW,MICRO MPU11470MLB0	
S754	87-A90-095-080	SW,TACT	EVQ11G04M	SW4	87-A91-500-010	SW,MICRO MPU11470MLB0	
S755	87-A90-095-080	SW,TACT	EVQ11G04M	SW5	87-A90-673-010	SW,MICRO ESE11SH1C	
S756	87-A90-095-080	SW,TACT	EVQ11G04M				
S757	87-A90-095-080	SW,TACT	EVQ11G04M				
PT C.B							
C101	87-010-387-080	CAP,E 470-25 SME					
C116	87-010-403-040	CAP,E 3.3-50 SME					
CN101	87-A61-122-010	CONN,11P V TID-A					
⚠ F101	87-035-460-010	FUSE,6.3A 250V T218<LH>					
⚠ F101	87-035-493-010	FUSE,8A 125V T237<U>					

○チップ抵抗部品コード／CHIP RESISTOR PART CODE

チップ抵抗部品コードの成り立ち
Chip Resistor Part Coding



チップ抵抗
Chip resistor

容量 Wattage	種類 Type	許容誤差 Tolerance	記号 Symbol	寸法／Dimensions (mm)				抵抗コード : A Resistor Code : A
				外形／Form	L	W	t	
1/16W	1005	± 5%	CJ		1.0	0.5	0.35	104
1/16W	1608	± 5%	CJ		1.6	0.8	0.45	108
1/10W	2125	± 5%	CJ		2	1.25	0.45	118
1/8W	3216	± 5%	CJ		3.2	1.6	0.55	128

TRANSISTOR ILLUSTRATION



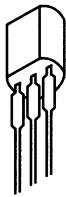
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KTC3198GR
CD1585BC
CSA952K



E C B

2SC3331(T/U)



E C B

CSC4115BC



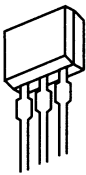
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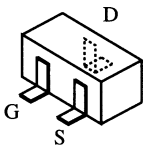
E C B

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KTC3199GR



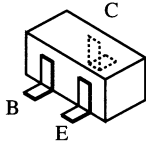
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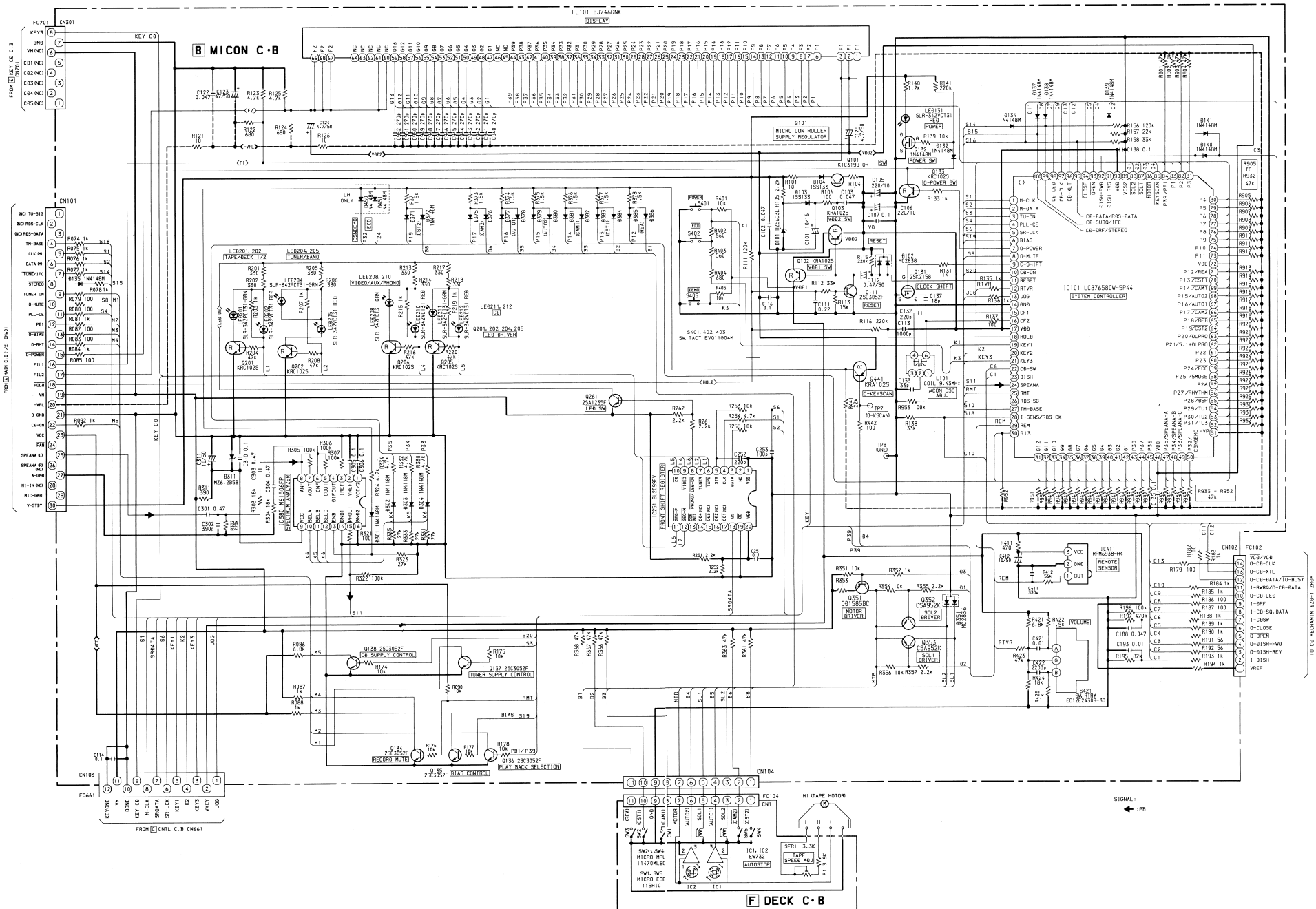
C

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CMBT5551
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RT1N144C

2SD1306E
KRA102S
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KRA107S



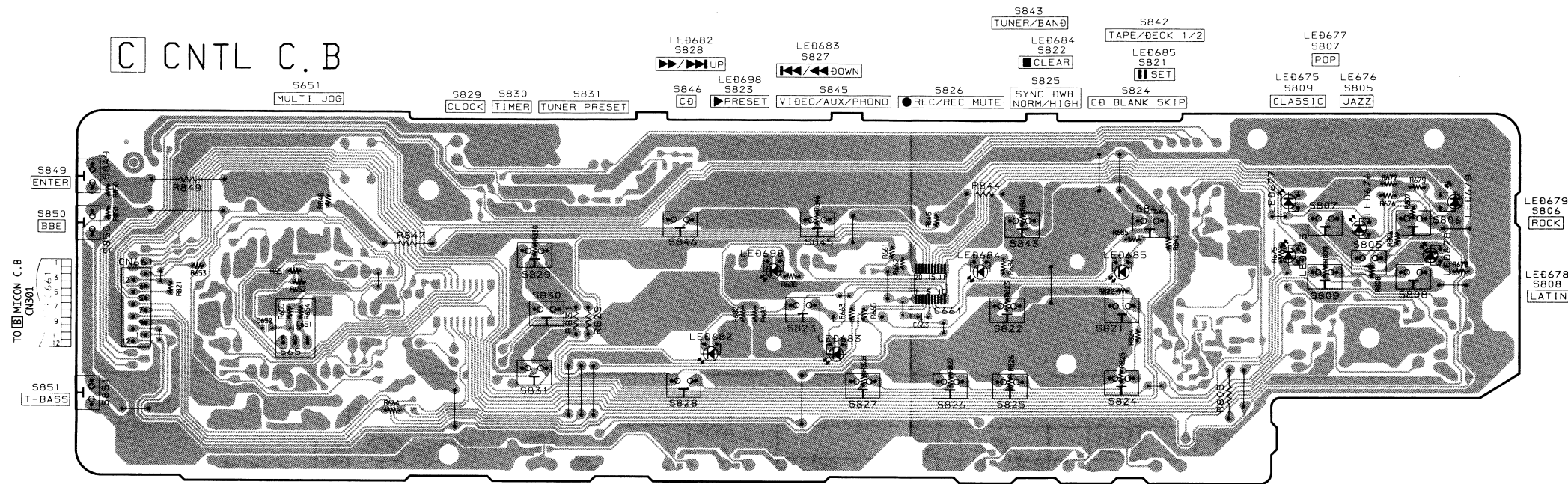




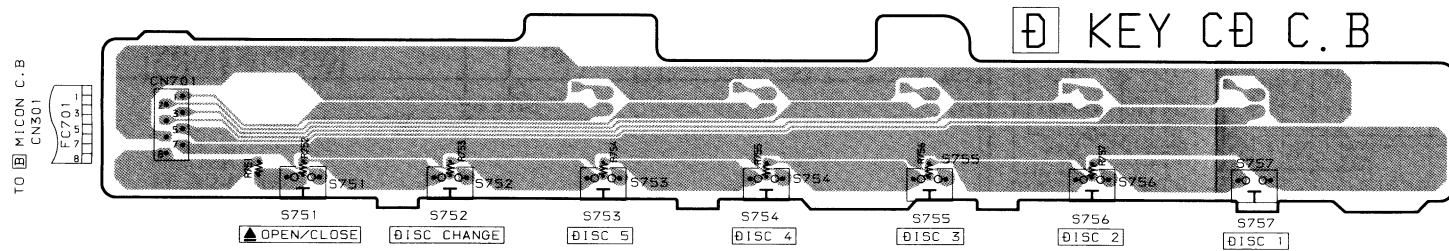
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A
B
C
D
E
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G
H
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J

C CNTL C.B



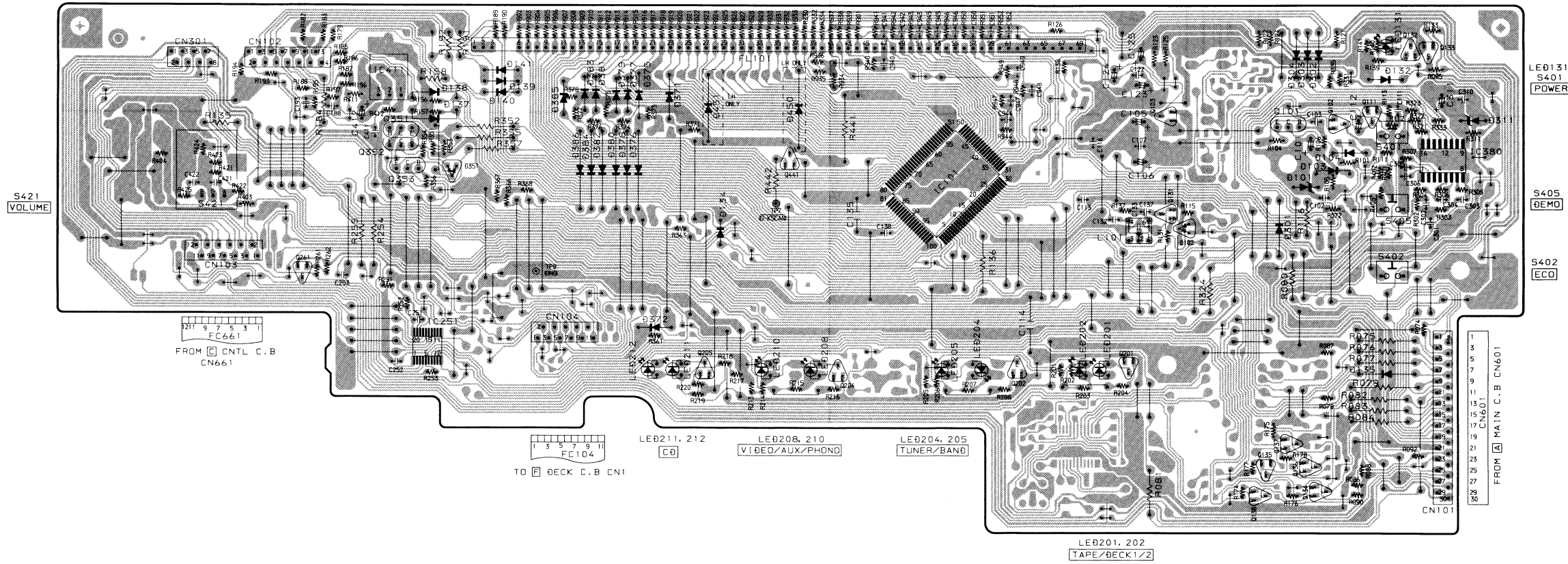
D KEY CD C.B



FROM D KEY CD C.B TO CD MECHASM
CN701
FC701
1 3 5 7 8
FC102
1 3 5 7 9 11 13 14
IC411
REMOTE SENSOR

FL101
DISPLAY

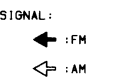
B MICON C.B

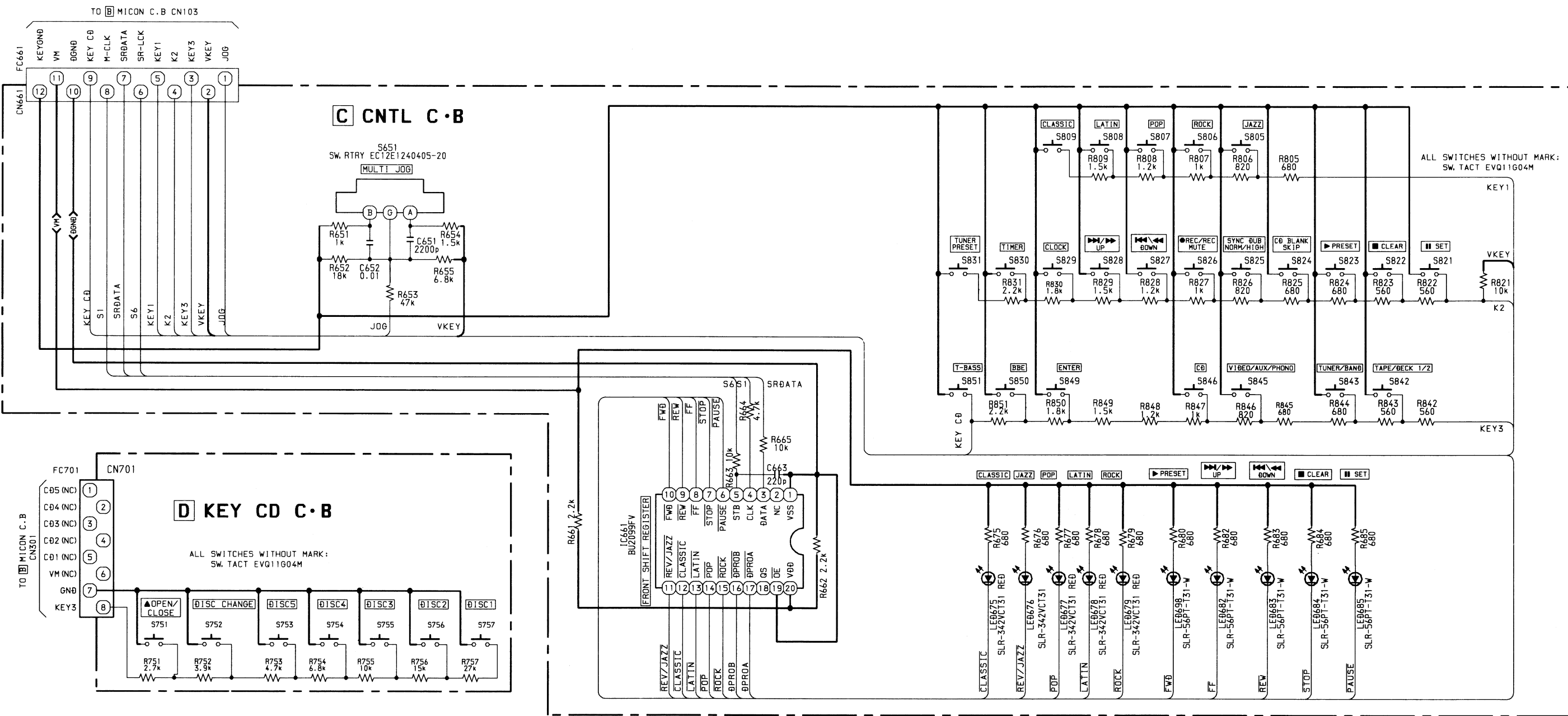


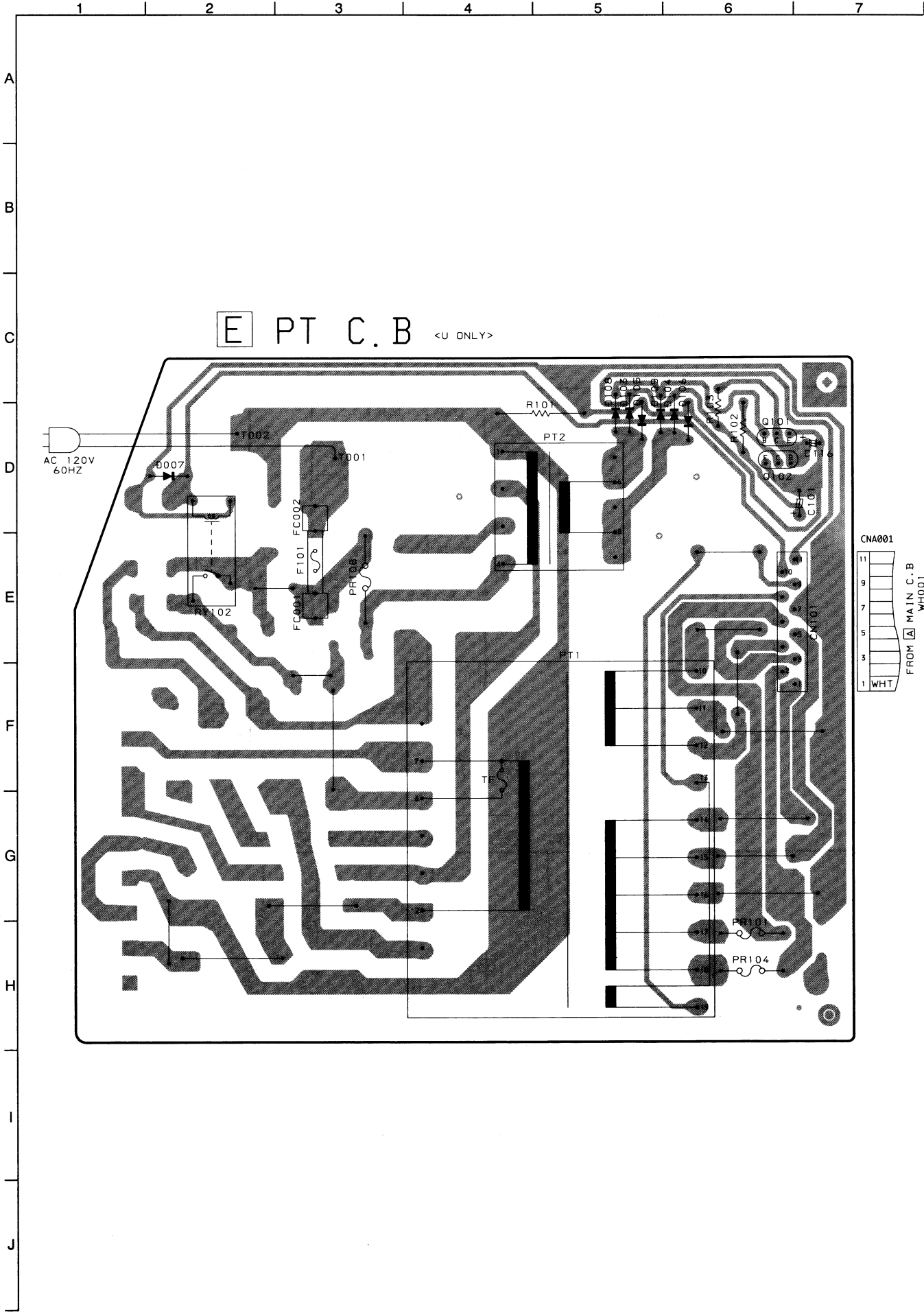
FROM C CNTL C.B
CN661
FC661
1 3 5 7 9 11

TO E DECK C.B CNI
FC104
1 3 5 7 9 11

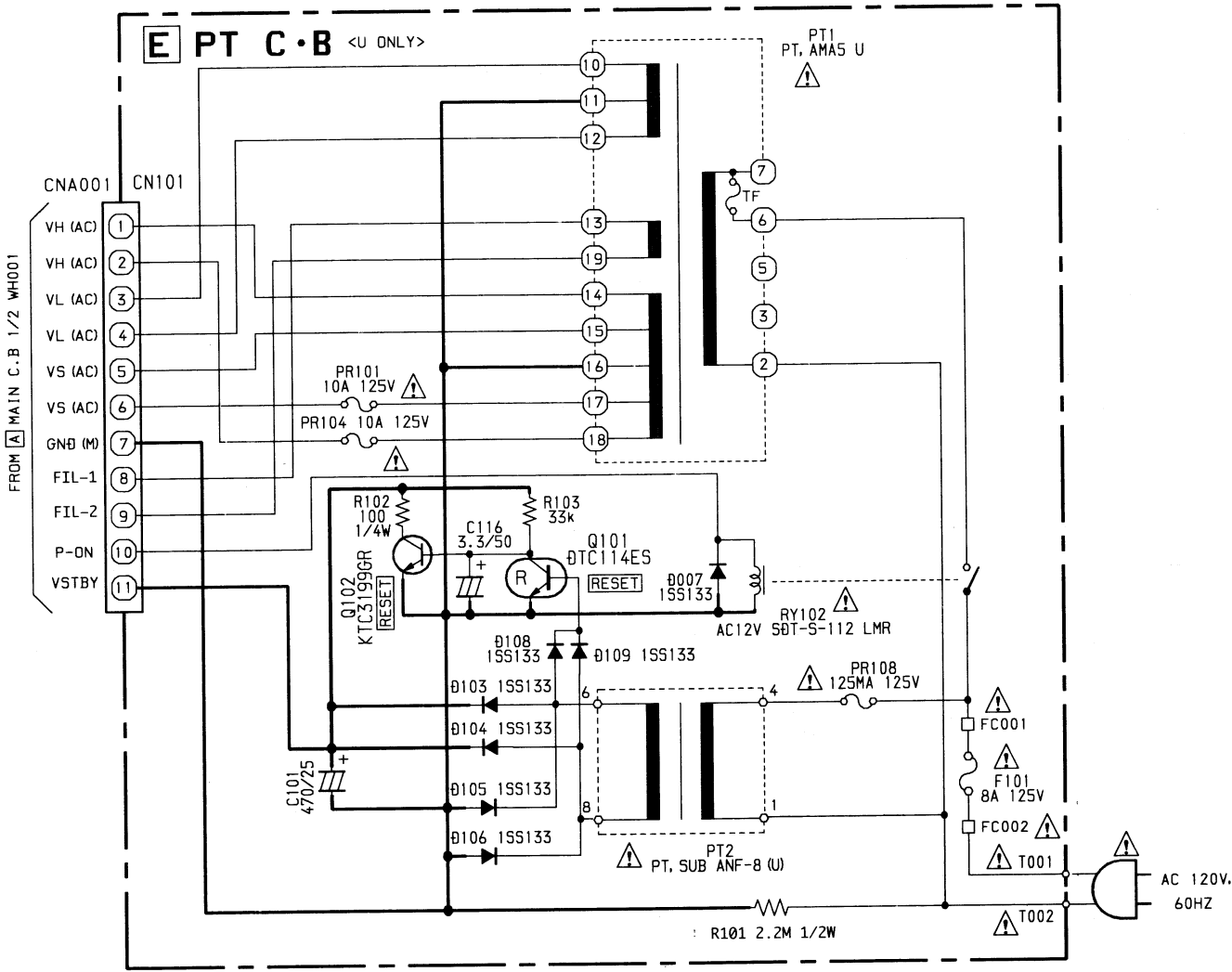
FROM A MAIN C.B CN601
CN601
1 3 5 7 9 11 13 15 17 19 21 23 25 27 29 31

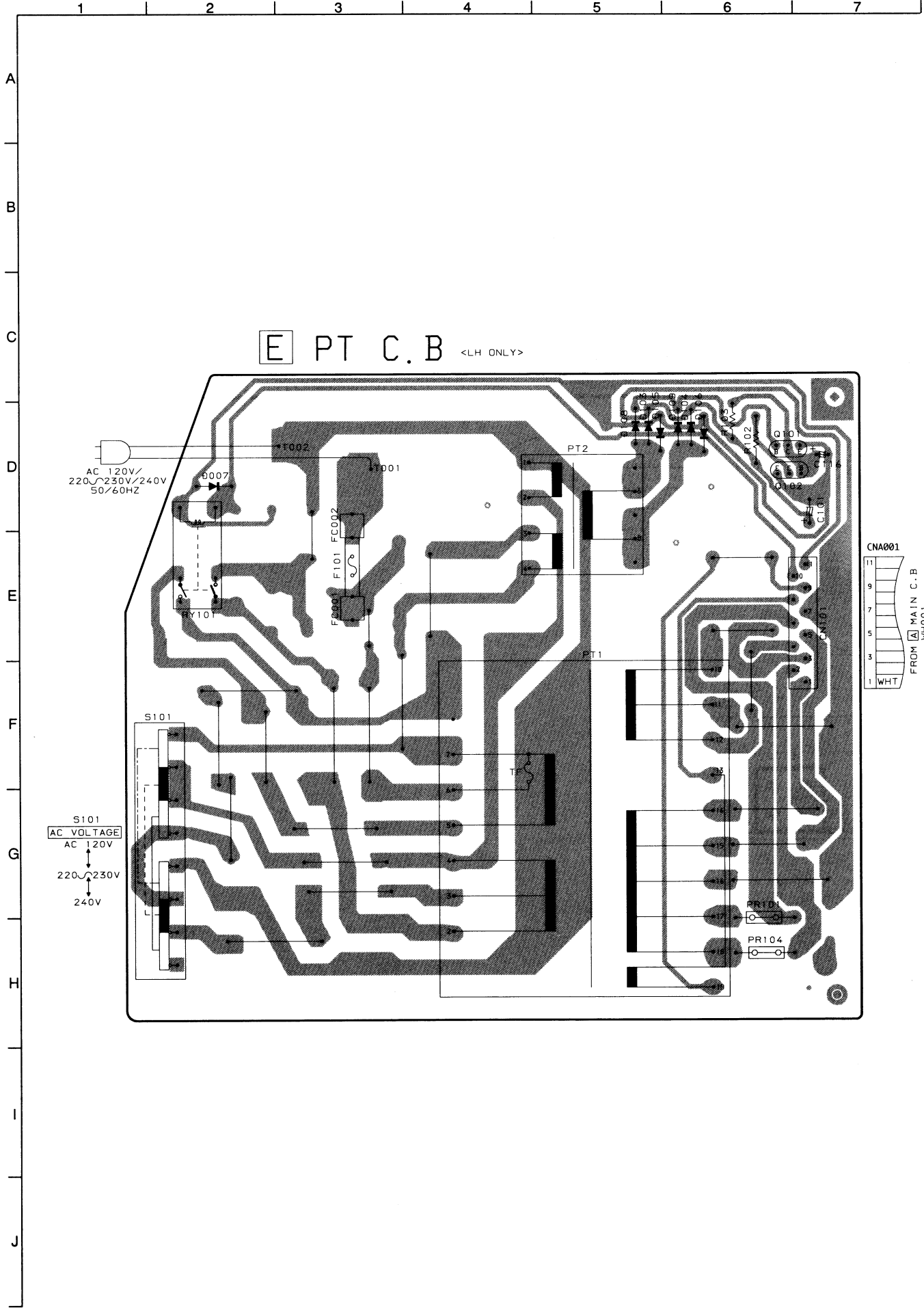




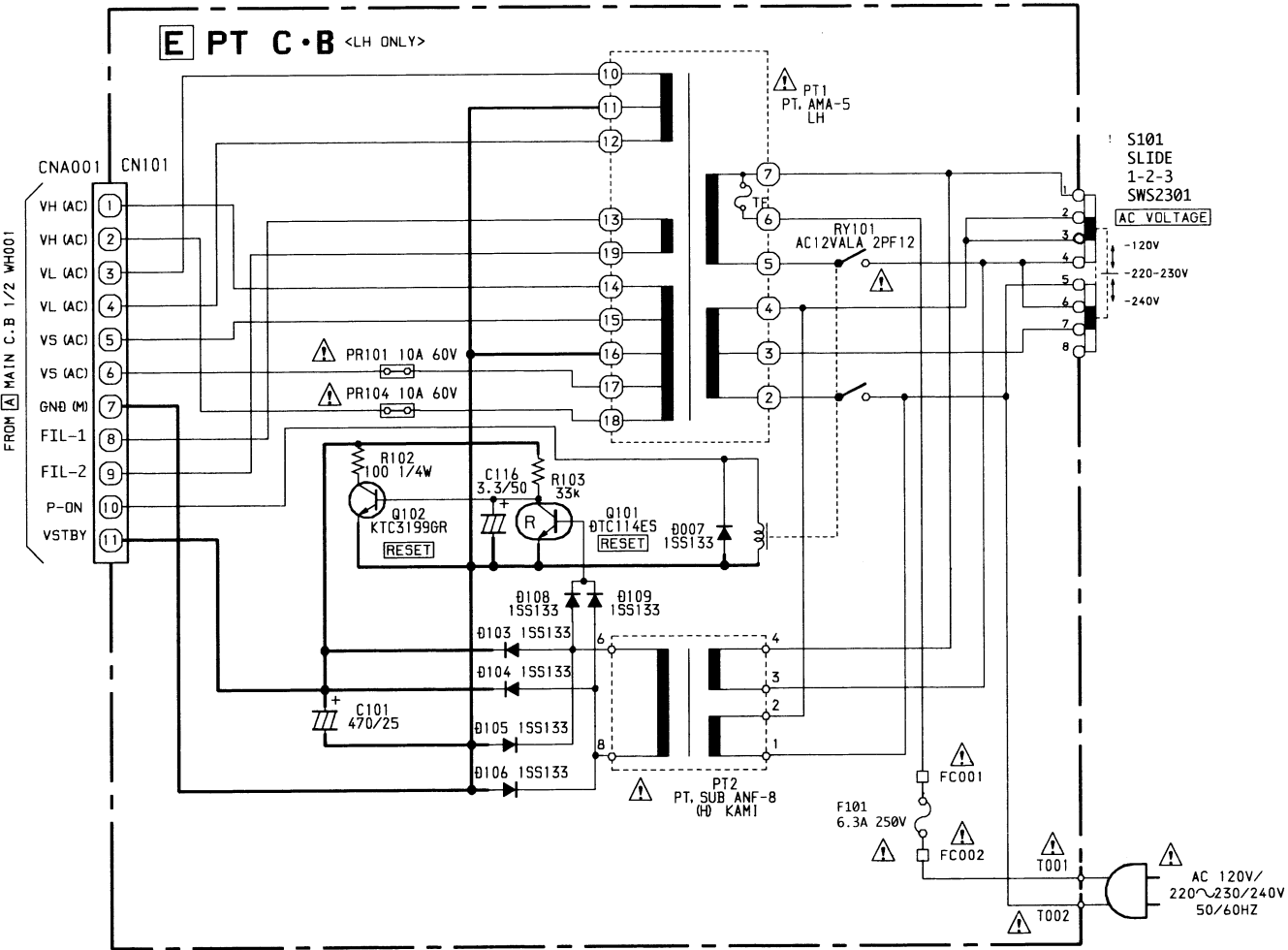


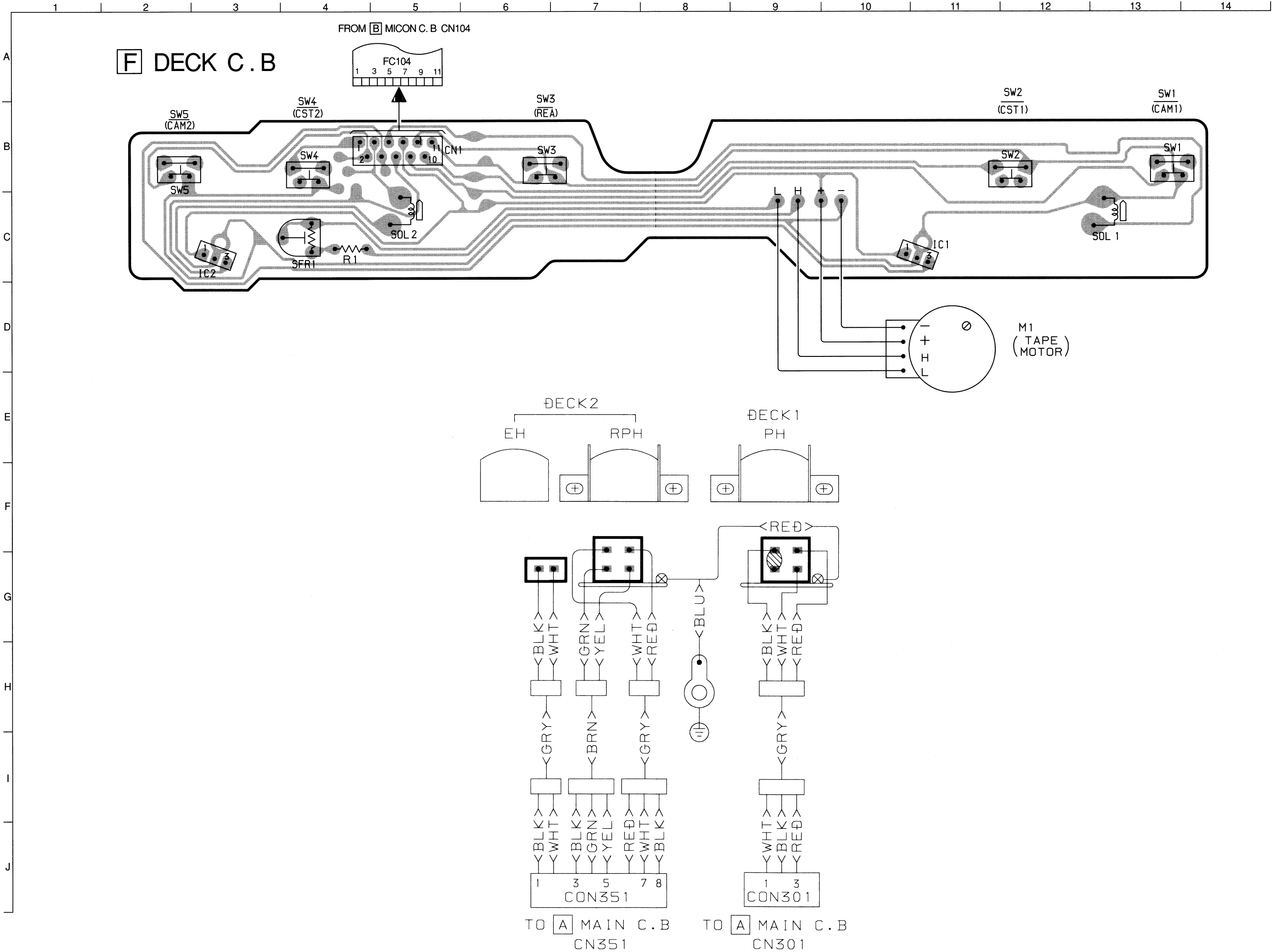
SCHEMATIC DIAGRAM – 5 (PT : U)





SCHEMATIC DIAGRAM – 6 (PT : LH)



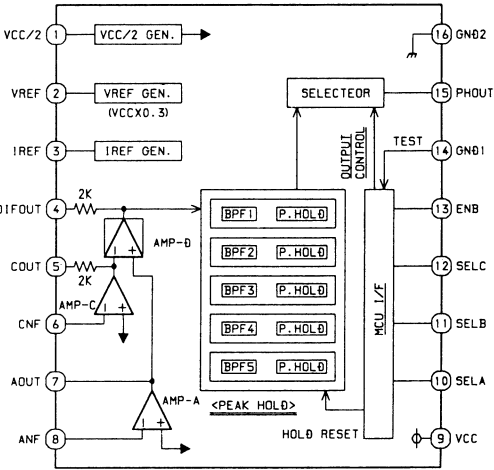


IC DESCRIPTION
IC, LC876580W-5P44

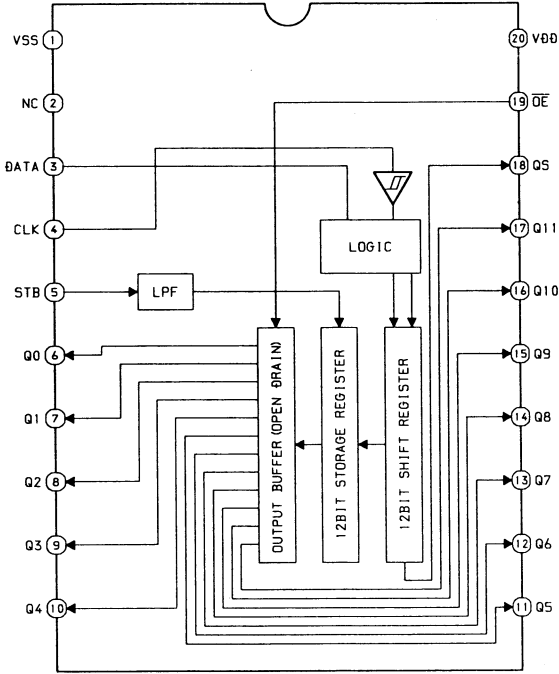
Pin No.	Pin Name	I/O	Description
1	M-CLK	O	Main IC control serial CLOCK output.
2	M-DATA	O	Main IC control serial DATA output.
3	TU-ON	O	Tuner supply control. L: ON.
4	PLL-CE	O	TUNER PLL IC control CHIP ENABLE output.
5	SR-LCK	O	SHIFT REGISTER IC control LATCH CLOCK output.
6	BIAS	O	Recording bias control.
7	O-POWER	O	System power control output. H: POWER ON.
8	O-MUTE	O	System mute control output. H: MUTE ON.
9	C-SHIFT	O	Microcomputer CLOCK SHIFT control output. L: SHIFT UP (initial H).
10	CD-ON	I	CD supply control.
11	RESET	I	Reset input.
12	RTVR	I	Waveform input for VOL rotary encoder.
13	JOG	I	Waveform input for JOG rotary encoder.
14	GND	–	Connected to GND.
15	CF1	I	Oscillator input for system clock (9.43MHz).
16	CF2	O	Oscillator output for system clock (9.43MHz).
17	VDD	–	Power supply.
18	HOLD	I	System HOLD input (A/D level port).
19	KEY1	I	Tact key matrix 1 input.
20	KEY2	I	Tact key matrix 2 input.
21	KEY3	I	Tact key matrix 3 input.
22	CD-SW	I	CD MECHA SW matrix input.
23	DISH	I	CD turntable photo sensor input.
24	SPEANA	I	Spectrum analyser level detection input.
25	RMT	I	Record ON/OFF control.
26	RDS_SG	I	During TUNER FUNC, RDS Signal level input (Not used).
27	TM-BASE	I	Reference signal input for clock.
28	I-SENS/ RDS-CK	I	During CD FUNC, CD DSP SENS input./ During TUNER FUNC, RDS serial clock input (Not used).
29	REM	I	Remote control signal input.
30 ~ 42	G13 ~ G1	O	FL grid G13 ~ G1 output.
43 ~ 45	P38 ~ P36	O	FL segment P38 ~ P36 output.
46	VDD	–	Power supply.
47	P35/SPEANA–A	O	FL segment P35 output/Spectrum analyser BPF switching control A output.
48	P34/SPEANA–B	O	FL segment P34 output/Spectrum analyser BPF switching control B output.
49	P33/SPEANA–C	O	FL segment P33 output/Spectrum analyser BPF switching control C output.
50	P32/CSNDEMO	O/I	FL segment P32 output/While initializing, DEMO MODE switching input. L: Normal DEMO. H: CASINO DEMO.
51	–VP	–	Power supply for FL input.
52	P31/TU3	O/I	FL segment P31 output/TUNER location switching 3 input.
53	P30/TU2	O/I	FL segment P30 output/TUNER location switching 2 input.
54	P29/TU1	O/I	FL segment P29 output/TUNER location switching 1 input.
55	P28/DSP	O/I	FL segment P28 output/DSP setting switching input. H: Absent (Not used).

Pin No.	Pin Name	I/O	Description
56	P27/RHYTHM	O/I	FL segment P27 output/RHYTHM setting switching input. H: Present (Not used).
57	P26	O	FL segment P26 output.
58	P25/5MODE	O/I	FL segment P25 output/GEQ 5MODE/4MODE setting input. H: 5 MODE (Not used).
59	P24/ECO	O/I	FL segment P24 output/ECO setting switching input. H: ECO mode off.
60	P23	O	FL segment P23 output.
61	P22	O	FL segment P22 output.
62	P21/5.1+DLPRO	O/I	FL segment P21 output/5.1CH+DOLBY PROLOGIC setting switching input. H: Existent (Not used).
63	P20/DLPRO	O/I	FL segment P20 output/DOLBY PROLOGIC setting switching input. H: Existent (Not used).
64	P19/CST2	O/I	FL segment P19 output/Deck 2 cassette existence detection SW input. L: Existent.
65	P18/REB	O/I	FL segment P18 output/Deck 2 side-B recording able/disable detection SW input. L: Able (Not used).
66	P17/CAM2	O/I	FL segment P17 output/Deck 2 cam-operation detection SW input. L: ON.
67	P16/AUTO1	O/I	FL segment P16 output/Deck 1 reel-rotation detection signal input.
68	P15/AUTO2	O/I	FL segment P15 output/Deck 2 reel-rotation detection signal input.
69	P14/CAM1	O/I	FL segment P14 output/Deck 1 cam-operation detection SW input. L: ON.
70	P13/CST1	O/I	FL segment P13 output/Deck 2 cassette existence detection SW input. L: Existent.
71	P12/REA	O/I	FL segment P12 output/Deck 2 side-A recording able/disable detection SW input. L: Able.
72	VDD	–	Power supply.
73 ~ 83	P11 ~ P1	O	FL segment P11 ~ P1 output.
84	P39/PB1	O/I	FL segment P39 output/Deck 1/2 select control. H: Deck 1.
85	KEYSCAN	O	Segment input timing output. L: Input timing.
86	MOTOR	O	DECK MECHA motor control output. L: ON.
87	SOL1	O	DECK 1 MECHA plunger control output. L: ON.
88	SOL2	O	DECK 2 MECHA plunger control output. L: ON.
89	VSS2	–	Connected to GND.
90	VDD	–	Power supply.
91	DISH-RVS	O	CD turntable control output. H: Reverse rotation.
92	DISH-FWD	O	CD turntable control output. H: Forward rotation.
93	OPEN	O	CD tray control output. L: OPEN.
94	CLOSE	O	CD tray control output. L: CLOSE.
95	CD-DATA/ RDS-DATA	O/I	During CD FUNC, CD DSP control serial data output/ During TUNER FUNC, RDS serial data input (Not used).
96	CD-XLT	O	CD DSP control serial LATCH output. LATCH when drop.
97	CD-CLK	O	CD DSP control serial CLOCK output.
98	CD-LED	O	CD flash window LED control output. H: ON
99	CD-SUBQ/ IFC	I	During CD FUNC, SUBQ serial data input/ During TUNER FUNC, IF COUNT data input.
100	CD-DRF/ STEREO	I	During CD FUNC, radio frequency detection input/ During TUNER STEREO signal input.

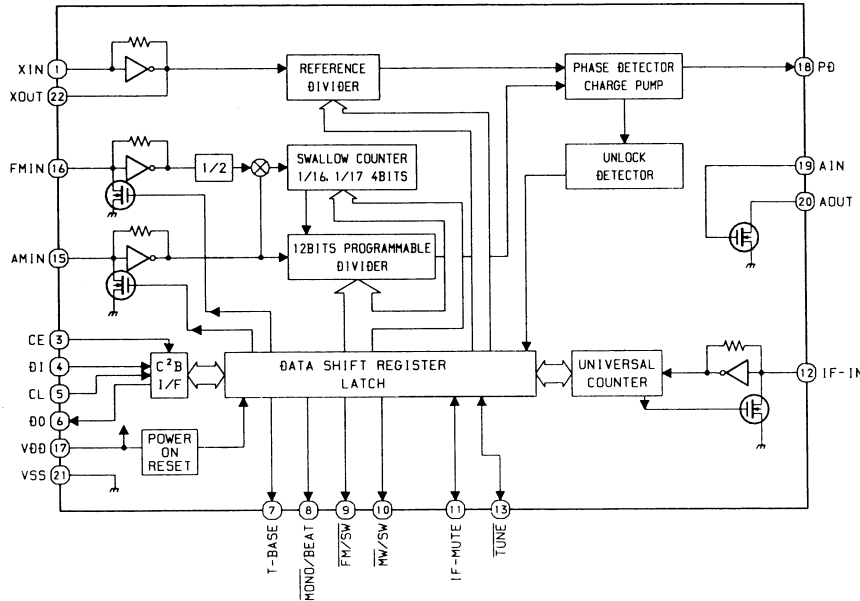
IC BLOCK DIAGRAM
IC, M61506FP



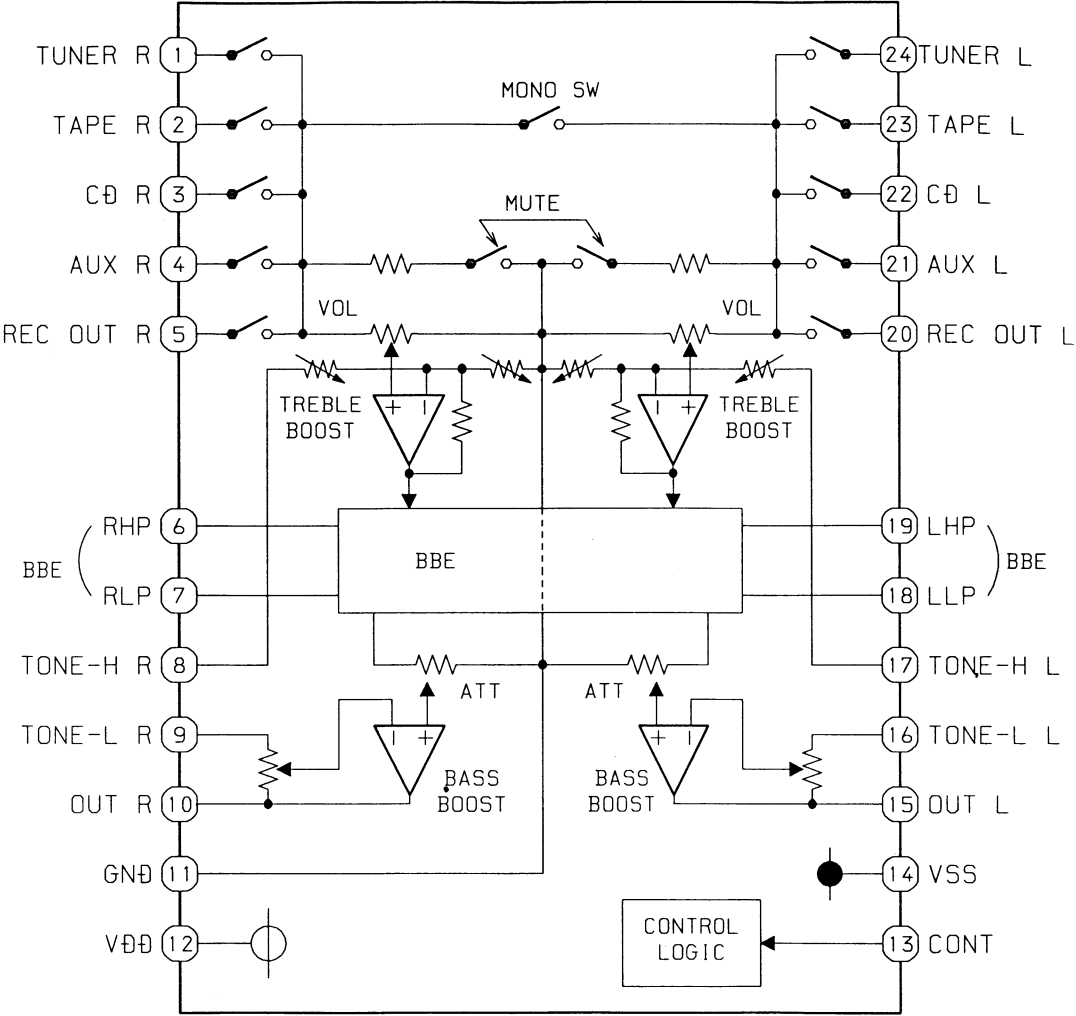
IC, BU2099FV



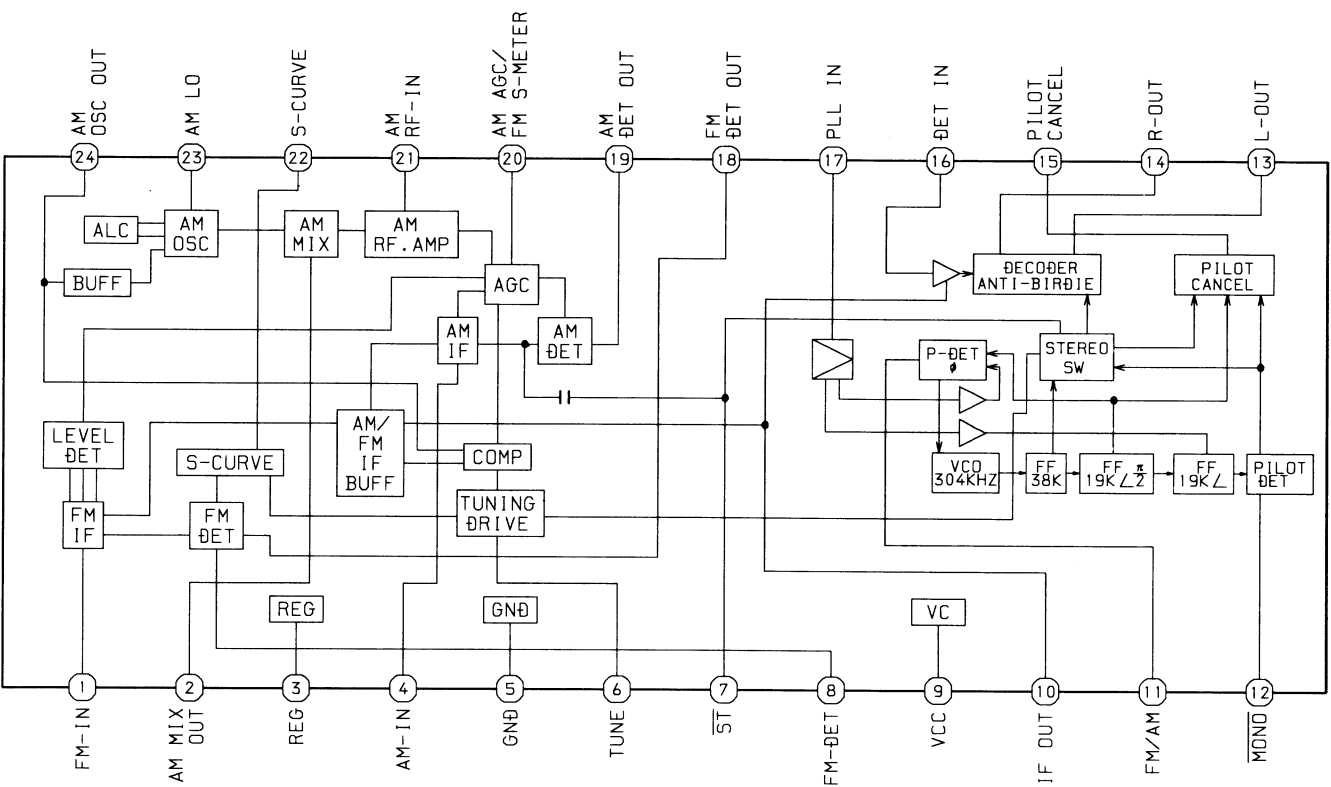
IC, LC72131D



IC, M61503FP

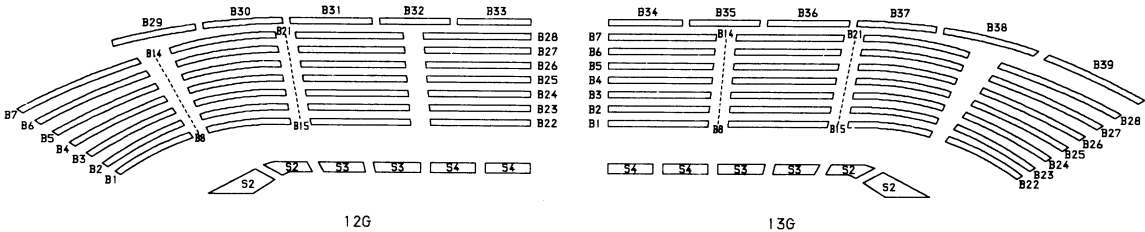
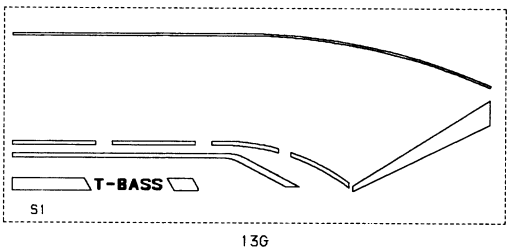
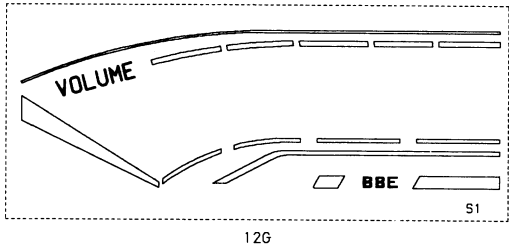
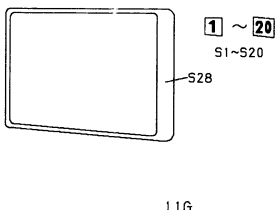
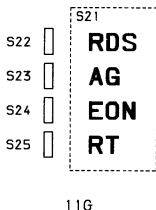
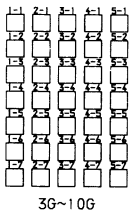
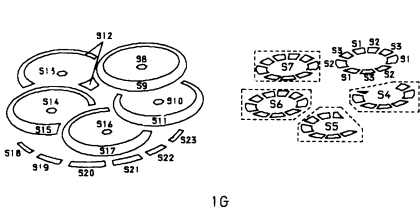
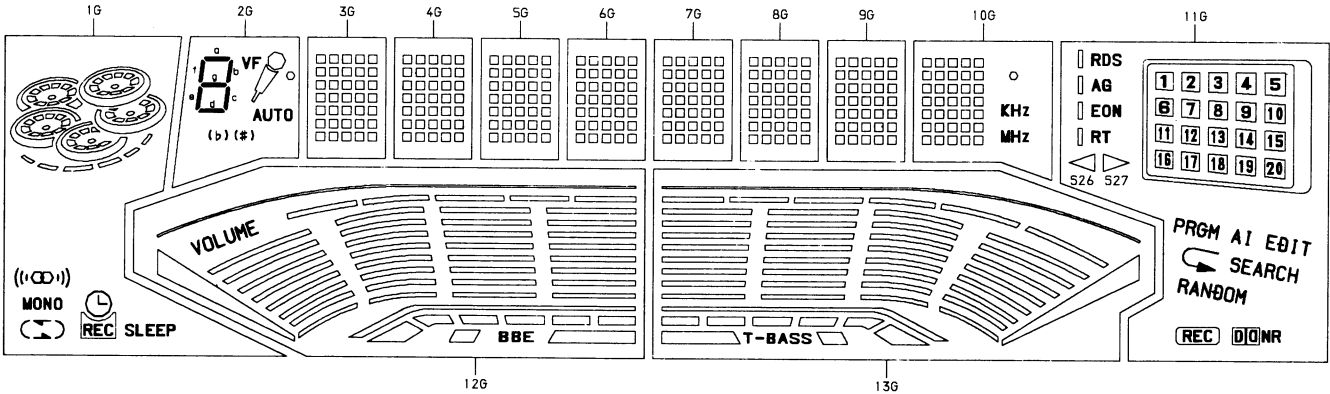


IC, LA1843



FL (BJ746GNK) GRID ASSIGNMENT & ANODE CONNECTION

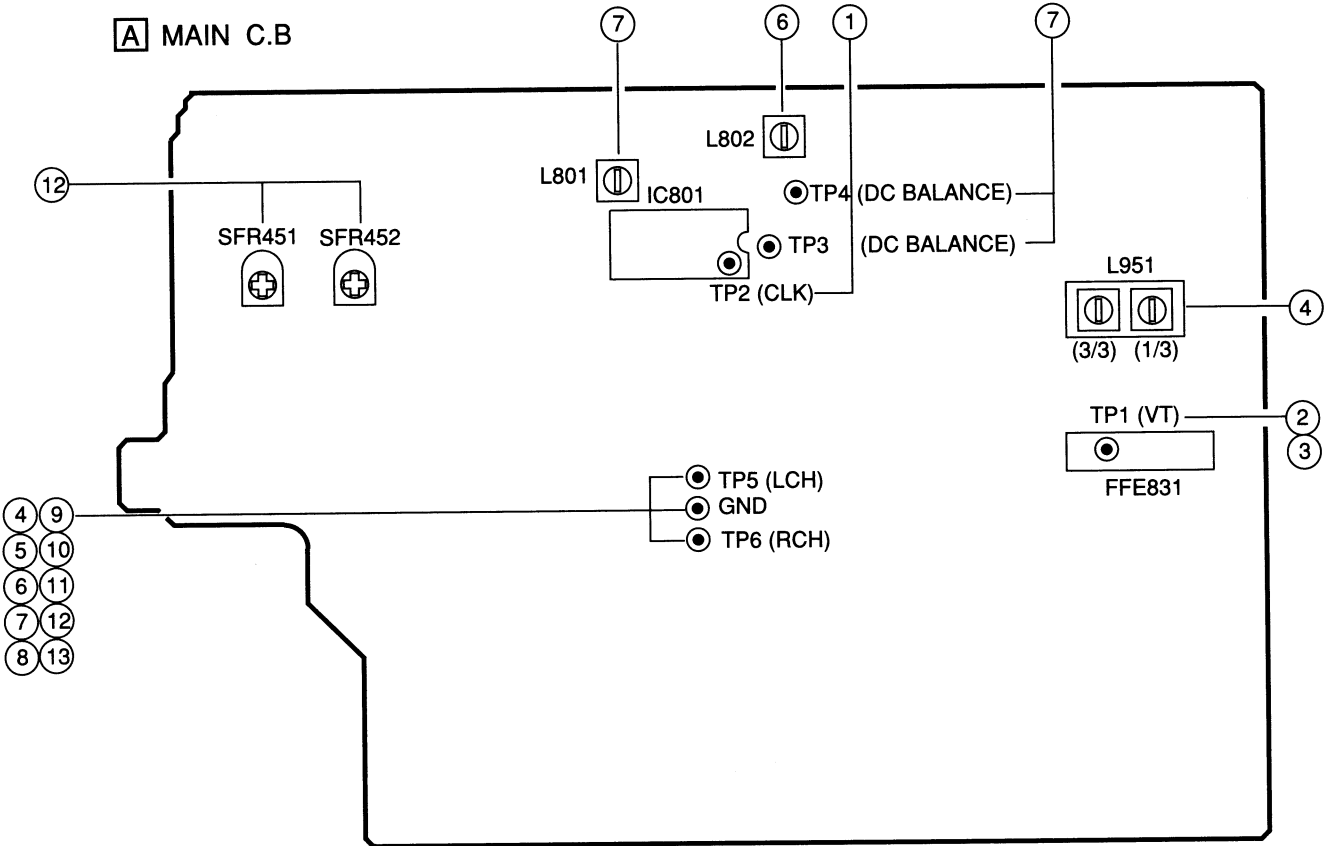
GRID ASSIGNMENT



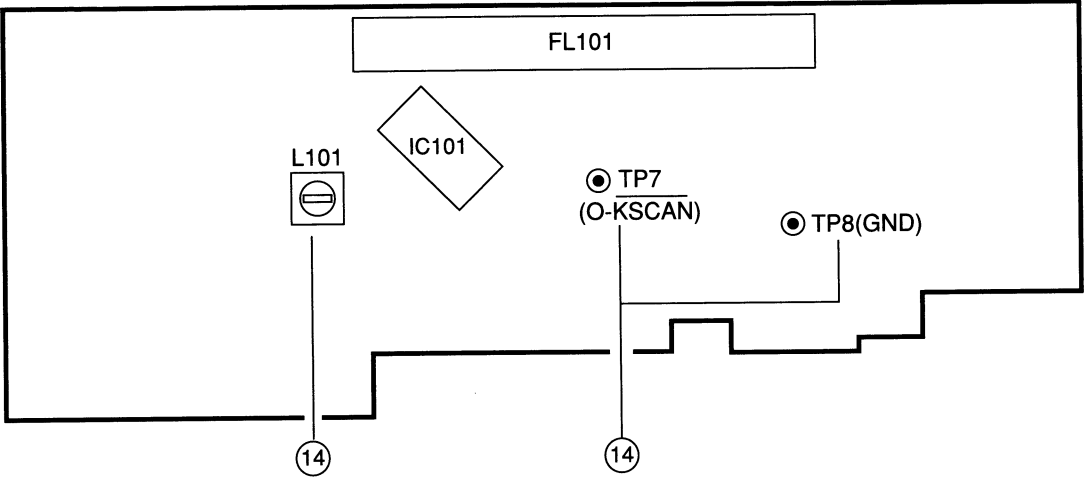
ANODE CONNECTION

	1G	2G	3G	4G	5G	6G	7G	8G	9G	10G	11G	12G	13G
P1	SLEEP	-	1-1	1-1	1-1	1-1	1-1	1-1	1-1	1-1	S28	S1	S1
P2		-	2-1	2-1	2-1	2-1	2-1	2-1	2-1	2-1	S1	S2	S2
P3		-	3-1	3-1	3-1	3-1	3-1	3-1	3-1	3-1	S2	S3	S3
P4		-	4-1	4-1	4-1	4-1	4-1	4-1	4-1	4-1	S3	S4	S4
P5		-	5-1	5-1	5-1	5-1	5-1	5-1	5-1	5-1	S4	B1	B1
P6		-	1-2	1-2	1-2	1-2	1-2	1-2	1-2	1-2	S5	B8	B8
P7	MONO	-	2-2	2-2	2-2	2-2	2-2	2-2	2-2	2-2	S6	B15	B15
P8		-	3-2	3-2	3-2	3-2	3-2	3-2	3-2	3-2	S7	B22	B22
P9	-	-	4-2	4-2	4-2	4-2	4-2	4-2	4-2	4-2	S8	B2	B2
P10	-	-	5-2	5-2	5-2	5-2	5-2	5-2	5-2	5-2	S9	B9	B9
P11	-	-	1-3	1-3	1-3	1-3	1-3	1-3	1-3	1-3	S10	B16	B16
P12	S7	-	2-3	2-3	2-3	2-3	2-3	2-3	2-3	2-3	S11	B23	B23
P13	S13	-	3-3	3-3	3-3	3-3	3-3	3-3	3-3	3-3	S12	B3	B3
P14	S12	-	4-3	4-3	4-3	4-3	4-3	4-3	4-3	4-3	S13	B10	B10
P15	S8	-	5-3	5-3	5-3	5-3	5-3	5-3	5-3	5-3	S14	B17	B17
P16	S1		1-4	1-4	1-4	1-4	1-4	1-4	1-4	1-4	S15	B24	B24
P17	S3	VF	2-4	2-4	2-4	2-4	2-4	2-4	2-4	2-4	S16	B4	B4
P18	S2		3-4	3-4	3-4	3-4	3-4	3-4	3-4	3-4	S17	B11	B11
P19	S9	a	4-4	4-4	4-4	4-4	4-4	4-4	4-4	4-4	S18	B18	B18
P20	S6	b	5-4	5-4	5-4	5-4	5-4	5-4	5-4	5-4	S19	B25	B25
P21	S14	f	1-5	1-5	1-5	1-5	1-5	1-5	1-5	1-5	S20	B5	B5
P22	S15	g	2-5	2-5	2-5	2-5	2-5	2-5	2-5	2-5	S21	B12	B12
P23	S18	c	3-5	3-5	3-5	3-5	3-5	3-5	3-5	3-5	 NR	B19	B19
P24	S19	e	4-5	4-5	4-5	4-5	4-5	4-5	4-5	4-5		B26	B26
P25	S20	d	5-5	5-5	5-5	5-5	5-5	5-5	5-5	5-5	S22	B6	B6
P26	S21	AUTO	1-6	1-6	1-6	1-6	1-6	1-6	1-6	1-6	S23	B13	B13
P27	S22	(b)	2-6	2-6	2-6	2-6	2-6	2-6	2-6	2-6	S24	B20	B20
P28	S23	(#)	3-6	3-6	3-6	3-6	3-6	3-6	3-6	3-6	S25	B27	B27
P29	S5	-	4-6	4-6	4-6	4-6	4-6	4-6	4-6	4-6	S26	B7	B7
P30	S16	-	5-6	5-6	5-6	5-6	5-6	5-6	5-6	5-6	S27	B14	B14
P31	S17	-	1-7	1-7	1-7	1-7	1-7	1-7	1-7	1-7	EDIT	B21	B21
P32	S4	-	2-7	2-7	2-7	2-7	2-7	2-7	2-7	2-7	AI	B28	B28
P33	S10	-	3-7	3-7	3-7	3-7	3-7	3-7	3-7	3-7	PRGM	B29	B34
P34	S11	-	4-7	4-7	4-7	4-7	4-7	4-7	4-7	4-7	SEARCH	B30	B35
P35	-	-	5-7	5-7	5-7	5-7	5-7	5-7	5-7	5-7		B31	B36
P36	-	-	-	-	-	-	-	-	-		RANDOM	B32	B37
P37	-	-	-	-	-	-	-	-	-	KHz	-	B33	B38
P38	-	-	-	-	-	-	-	-	-	MHz	-	-	B39

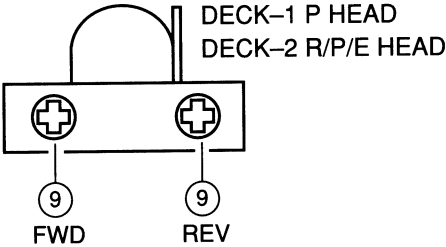
ADJUSTMENT <TUNER / DECK / MICON>



B MICON C.B



F DECK C.B



< TUNER SECTION >

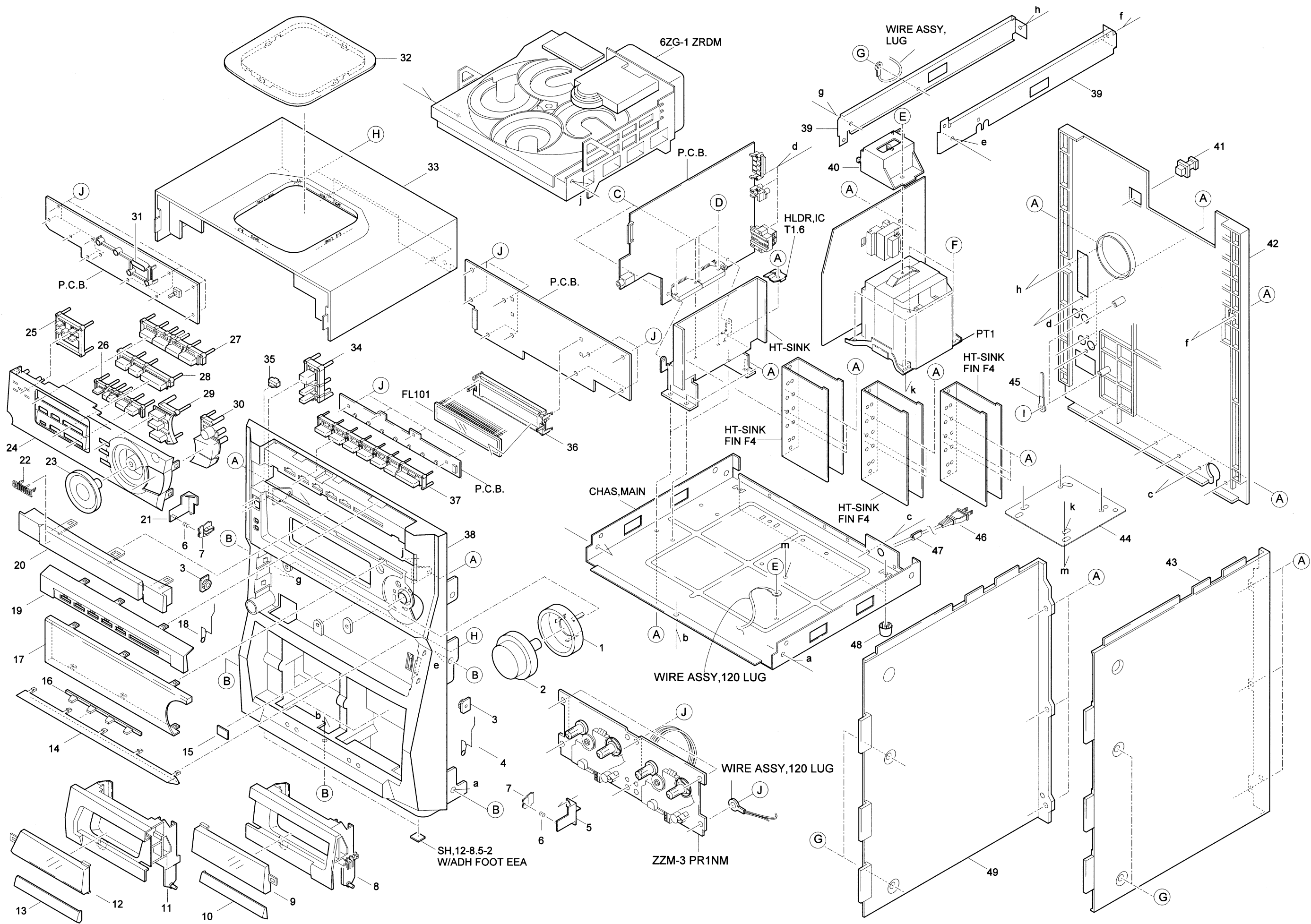
1. Clock frequency Check
Settings : • Test point : TP2
Method : Set to AM 1710kHz and check that the test point is 2160kHz $\pm$ 45Hz.
2. AM VT Check
Settings : • Test point : TP1 (VT)
Method : Set to AM 1710kHz, 530kHz and check that the test point is less than 8.5V (1710kHz) and more than 0.6V (530kHz).
3. FM VT Check
Settings : • Test point : TP1 (VT)
Method : Set to FM 87.5MHz, 108.0MHz and check that the test point is more than 0.5V (87.5MHz) and less than 8.0V (108.0MHz).
4. AM Tracking Adjustment
Settings : • Test point : TP5(Lch), TP6(Rch)
• Adjustment location :
L951(1/3) 1000kHz
Method : Set to AM 1000kHz and adjust L951(1/3) to MAX.
5. FM Tracking Check
Settings : • Test point : TP5(Lch), TP6(Rch)
Method : Set to FM 98.0MHz and check that the test point is less than 9dB μ V.
6. AM IF Adjustment
Settings : • Test point : TP5(Lch), TP6(Rch)
• Adjustment location :
L802 450kHz
7. DC Balance / Mono Distortion Adjustment
Settings : • Test point : TP3, TP4 (DC Balance)
: TP5(Lch), TP6(Rch) (Distortion)
• Adjustment location : L801
• Input level : 60dB μ V
Method : Set to FM 98.0MHz and adjust L801 so that the voltage between TP3 and TP4 becomes 0V $\pm$ 0.04V.
Next, check that the distortion is less than 1.3%.

< DECK SECTION >

8. Tape Speed Adjustment (DECK 2)
Settings : • Test tape : TTA-100
• Test point : TP5(Lch), TP6(Rch)
• Adjustment location : SFR1
Method : Play back the test tape and adjust SFR1 so that the frequency counter reads 3000Hz $\pm$ 5Hz and $\pm$ 45Hz (REV) with respect to forward speed.
9. Head Azimuth Adjustment (DECK 1, DECK 2)
Settings : • Test tape : TTA-330
• Test point : TP5(Lch), TP6(Rch)
• Adjustment location : Head azimuth adjustment screw
Method : Play back (FWD) the 8kHz signal of the test tape and adjust screw so that the output becomes maximum.
Next, perform on REV PLAY mode.
10. PB Frequency Response Check (DECK 1, DECK 2)
Settings : • Test tape : TTA-330
• Test point : TP5(Lch), TP6(Rch)
Method : Play back the 315Hz and 8kHz signals of the test tape and check that the output ratio of the 8kHz signal with respect to that of the 315Hz signal is within 5dB.
11. PB Sensitivity Check (DECK 1, DECK 2)
Settings : • Test tape : TTA-200
• Test point : TP5(Lch), TP6(Rch)
Method : Play back the test tape and check that the output level of the test point is 140mV $\pm$ 3dB.
12. REC/PB Frequency Response Adjustment (DECK 2)
Settings : • Test tape : TTA-602
• Test point : TP5(Lch), TP6(Rch)
• Input signal : 1kHz / 8kHz (LINE IN)
• Adjustment location : SFR451 (Lch)
SFR452 (Rch)
Method : Apply a 1kHz signal and REC mode. Then adjust OSC attenuator so that the output level at the TP5, TP6 becomes -20VU. Record and play back the 1kHz and 8kHz signals and adjust SFRs so that the output of the 8kHz signals becomes 0.5dB $\pm$ 0.5dB with respect to that of the 1kHz signal.
13. REC/PB Sensitivity Check (DECK 2)
Settings : • Test tape : TTA-602
• Test point : TP5(Lch), TP6(Rch)
• Input signal : 1kHz (LINE IN)
Method : Apply a 1kHz signal and REC mode. Then adjust OSC attenuator so that the output level at TP5, TP6 becomes 0VU. Record and play back the 1kHz signals and check that the output is 0dB $\pm$ 3.0dB.

< MICON SECTION >

14. μ -CON OSC Adjustment
Settings : • Test point : TP7 (O-KSCAN)
• Adjustment location : L101
Method : Insert AC plug while pressing TUNER function key. Adjust L101 so that the frequency at the test point is 208.80Hz $\pm$ 0.21Hz.



MECHANICAL PARTS LIST 1 / 1

If can't understand for Description please kindly refer to " REFERENCE NAME LIST ".

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION	REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	8A-MA3-095-010		RING, VOL	33	8A-MA3-021-010		CABI, TOP U<U>
2	8A-MA3-090-010		KNOB, RTRY MAIN	34	8A-MA3-075-010		KEY, POWER
3	87-NF8-220-010		DMPR, 150	35	8A-MA3-101-010		REFLECTOR, POWER
4	8A-MA5-208-010		SPR-T, EJECT 2	36	87-MA5-203-010		GUIDE, FL
5	87-NF4-217-110		HLDR, LOCK 2	37	8A-MA3-061-010		KEY, CD
6	86-NF9-224-010		SPR-C, LOCK	38	8A-MA5-001-010		CABI, FR U 5
7	82-NF5-229-010		PLATE, LOCK	39	88-MA1-208-210		JOINT, CABI
8	8A-MA3-056-010		WINDOW, CASS R	40	8A-DB8-209-010		HLDR, PWB PT
9	8A-MA3-026-010		BOX, CASS R	41	84-ZG1-245-210		CAP, OPTICAL
10	8A-MA5-036-010		PANEL, CASS R 5	42	8A-MA5-012-010		CABI, REAR LHSTNM<LH>
11	8A-MA3-025-010		BOX, CASS L	42	8A-MA5-010-010		CABI, REAR USTNM<U>
12	8A-MA3-055-010		WINDOW, CASS L	43	8A-MA5-046-010		PANEL, SIDE R 5<LH>
13	8A-MA5-035-010		PANEL, CASS L 5	43	8A-MA5-048-010		PANEL, SIDE R 5 (U)<U>
14	8A-MA5-041-010		PANEL, FUN 4F	44	8A-MA3-208-010		PLATE PT
15	81-532-080-010		LABEL, CASS. COMPT	45	87-064-185-010		HLDR, WIRE
16	8A-MA5-102-010		REFLECTOR, FUN 4F	⚠ 46	87-A80-148-010		AC CORD ASSY, E BLK<LH>
17	8A-MA5-050-010		WINDOW, DISP 5<LH>	⚠ 46	87-A80-149-010		AC CORD ASSY, U BLK<U>
17	8A-MA5-052-010		WINDOW, DISP U 5<U>	47	87-085-185-010		BUSHING, AC CORD (E)<LH>
18	8A-MA5-207-010		SPR-T, EJECT 1	47	87-A91-422-010		BUSHING, AC CORD(U)<U>
19	8A-MA5-034-010		PANEL, CD	48	87-MA3-062-010		FOOT, H17
20	8A-MA5-037-010		PANEL ASSY, TRAY 5	49	8A-MA5-045-010		PANEL, SIDE L 5<LH>
21	87-NF4-216-010		HLDR, LOCK 1	49	8A-MA5-047-010		PANEL, SIDE L 5 (U)<U>
22	87-B00-002-010		BADGE, AIWA 30 ABS SIL	A	87-067-703-010		TAPPING SCREW, BVT2+3-10
23	8A-MA3-093-010		KNOB ASSY, RTRY JOG	B	87-591-095-410		TAPPING SCREW, QIT+3-8 (GLD)
24	8A-MA5-030-010		PANEL, FR 5	C	87-NF4-224-010		S-SCREW, IT3B+3-8 CU
25	8A-MA5-080-010		KEY ASSY, GEQ 5M	D	87-067-581-010		BVT2+3-15 W/O
26	8A-MA3-084-010		KEY ASSY, FF	E	87-067-688-010		BVTT+3-6
27	8A-MA5-066-010		KEY, FUN 4F	F	87-067-975-010		S-SCREW, 1T+4-8
28	8A-MA5-081-010		KEY ASSY, PLAY	G	87-067-641-010		UTT2+3-8 (W/O SLOT) BL
29	8A-MA3-071-010		KEY, TIMER	H	87-067-758-010		BVT2+3-12 W/O SLOT
30	8A-MA3-073-010		KEY, ENTER	I	87-067-579-010		TAPPING SCREW, BVT2+3-8
31	8A-MA3-210-010		GUIDE, LED OPE	J	87-078-060-010		BVIT3PB+3-10
32	8A-MA3-057-010		WINDOW, TOP<LH>				
32	8A-MA3-058-010		WINDOW, TOP U<U>				
33	8A-MA3-020-010		CABI, TOP<LH>				

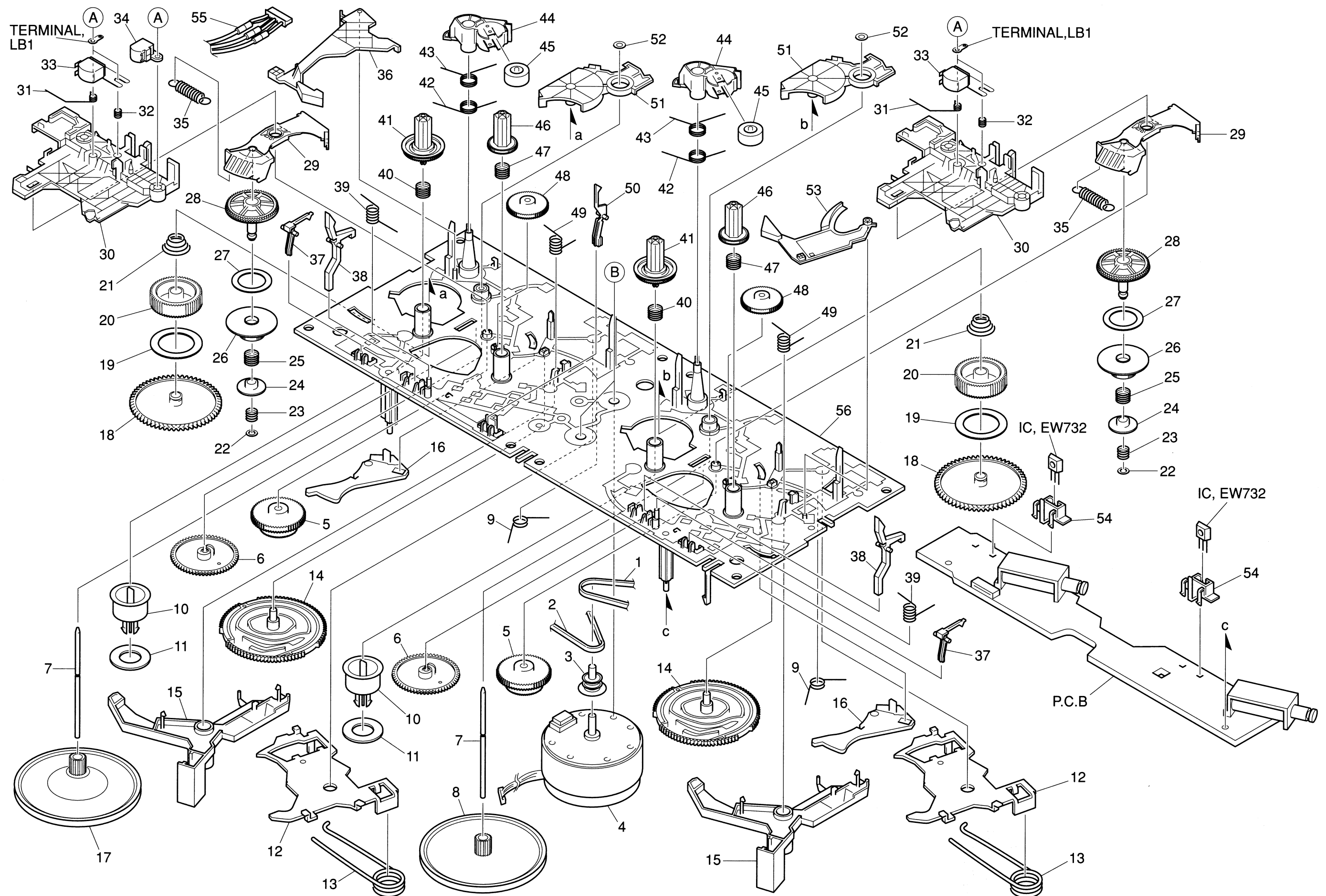
COLOR NAME TABLE

Basic color symbol	Color	Basic color symbol	Color	Basic color symbol	Color
B	Black	C	Cream	D	Orange
G	Green	H	Gray	L	Blue
LT	Transparent Blue	N	Gold	P	Pink
R	Red	S	Sliver	ST	Titan Silver
T	Brown	V	Violet	W	White
WT	Transparent White	Y	Yellow	YT	Transparent Yellow
LM	Metallic Blue	LL	Light Blue	GT	Transparent Green
LD	Dark Blue	DT	Transparent Orange	GM	Metallic Green
YM	Metallic Yellow				

TAPE MECHANISM PARTS LIST 1 / 1

If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

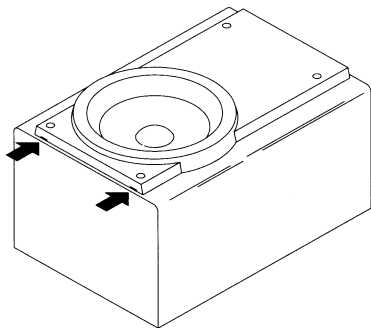
REF. NO.	PART NO.	KANRI NO.	DESCRIPTION	REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	8Z-ZM3-227-010		BELT, MAIN M3	31	8Z-ZM3-233-010		SPR-T, BRG M3
2	8Z-ZM3-235-010		BELT, MAIN L	32	84-ZM2-227-310		SPR-C, AZIMUTH
3	8Z-ZM1-235-010		PULLEY, MOT	33	87-A90-403-110		HEAD, RPH MS15R
4	87-045-347-010		MOT, SHU2L 70	34	87-A90-404-010		HEAD, EH LE15B
5	8Z-ZM1-232-010		GEAR, IDL FF/REW	35	8Z-ZM3-239-010		SPR-E, FR
6	8Z-ZM3-244-010		GEAR, CAM TD20	36	8Z-ZM3-211-010		LEVER, EJECT R
7	8Z-ZM3-242-010		SHAFT, CAP M3	37	8Z-ZM3-225-010		LEVER, STOP
8	8Z-ZM3-228-010		FLY-WHL, M3	38	8Z-ZM3-221-010		LEVER, CAS
9	8Z-ZM3-231-010		SPR-T, TRIG	39	8Z-ZM3-234-010		SPR-T, LVR CAS
10	8Z-ZM3-213-010		CLR, MG	40	8Z-ZM3-223-010		SPR-C, REEL R M3
11	8Z-ZM3-616-010		RING MAGNET 4	41	8Z-ZM1-225-110		GEAR, REEL R
12	8Z-ZM3-243-010		LEVER ASSY, HD UP	42	8Z-ZM3-240-010		SPR-T, T-UP M3
13	8Z-ZM3-238-010		SPR-T, HD UP	43	8Z-ZM3-237-010		SPR-T, PINCH M3
14	8Z-ZM3-219-010		GEAR, CAM M3	44	8Z-ZM3-215-010		LEVER, PINCH M3
15	8Z-ZM3-206-010		LEVER, TRIG	45	8Z-ZM1-261-110		ROLLER ASSY, PINCH
16	8Z-ZM3-209-010		LEVER, CAM FR	46	8Z-ZM1-226-010		GEAR, REEL L
17	8Z-ZM2-211-010		FLY-WHL, ZZM-2	47	8Z-ZM3-222-010		SPR-C, REEL L M3
18	8Z-ZM1-228-010		GEAR, SLIP T-UP B	48	8Z-ZM3-251-010		GEAR, IDL REW M3
19	8Z-ZM1-265-010		FELT, T-UP	49	8Z-ZM3-236-010		SPR-T, PLAY M3
20	8Z-ZM1-227-010		GEAR, SLIP T-UP A	50	8Z-ZM1-240-110		LVR, REC(*)
21	8Z-ZM1-251-110		SPR-C, T-UP SLIP	51	8Z-ZM3-216-010		LEVER, T-UP M3
22	8Z-ZM1-275-010		W-L, 1, 47-4-0.25	52	87-B10-301-010		W-L, 1.63-3.2-05 SLIT
23	8Z-ZM1-257-010		SPR-C, F/R	53	8Z-ZM3-212-010		LEVER, EJECT L
24	8Z-ZM1-236-010		CLR, SLIP FF/REW	54	8Z-ZM3-214-010		HLDR, IC
25	8Z-ZM3-226-010		SPR-C, FR M3	55	86-ZM3-605-110		CONN ASSY, 8P -RPB
26	8Z-ZM3-250-010		GEAR, SLIP F/R A M3	56	8Z-ZM3-203-010		CHAS ASSY, M3
27	8Z-ZM1-269-010		FELT, FF/REW 2	A	84-ZM2-242-010		S-SCREW, AZ1-2-6.4
28	8Z-ZM1-238-110		GEAR, SLIP FF/REW B 2	B	8Z-ZM2-220-110		V+2.6 ZZM-2
29	8Z-ZM3-220-010		LEVER, FR M3				
30	8Z-ZM3-205-010		LEVER, PLAY M3				



SPEAKER DISASSEMBLY INSTRUCTIONS

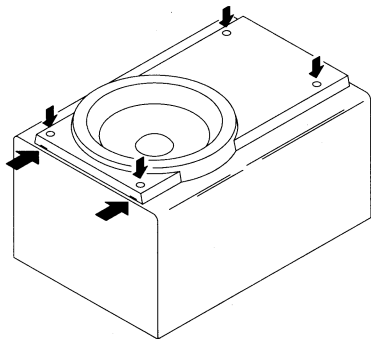
Type.1

Insert a flat-bladed screwdriver into the position indicated by the arrows and remove the panel. Remove the screws of each speaker unit and then remove the speaker units.



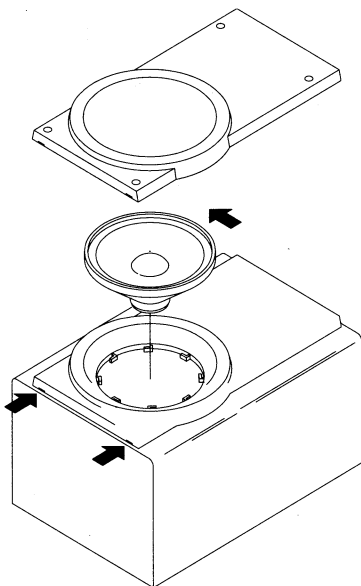
Type.2

Remove the grill frame and four pieces of rubber caps by pulling out with a flat-bladed screwdriver. Remove the screws from hole where installed rubber caps. Insert a flat-bladed screwdriver into the position indicated by the arrows and remove the panel. Remove the screws of each speaker unit and then remove the speaker units.

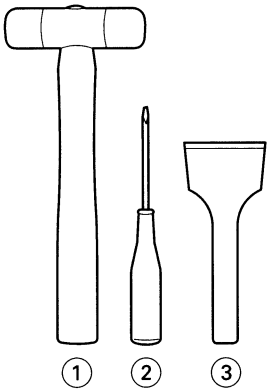


Type.3

Insert a flat-bladed screwdriver into the position indicated by the arrows and remove the panel. Turn the speaker unit to counter-clockwise direction while inserting a flat-bladed screwdriver into one of the hollows around speaker unit, and then remove the speaker unit. After replacing the speaker unit, install it turning to clockwise direction untill "click" sound comes out.



Type.4



TOOLS

- ① Plastic head hammer
- ② (⊖) flat head screwdriver
- ③ Cut chisel

How to Remove the PANEL, FR

1. Insert the (⊖) flat head screwdriver tip into the gap between the PANEL, FR and the PANEL, SPKR. Tap the head of the (⊖) flat head screwdriver with the plastic hammer head, and create the clearance as shown in Fig-1.
2. Insert the cut chisel in the clearance, and tap the head of the cut chisel with plastic hammer as shown in Fig-2, to remove the PANEL, FR.
3. Place the speaker horizontally. Tap head of the cut chisel with plastic hammer as shown in Fig-3, and remove the PANEL, FR completely.

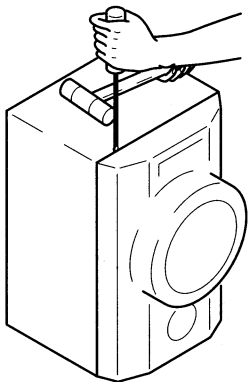


Fig-1

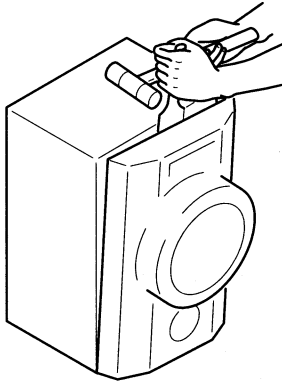


Fig-2

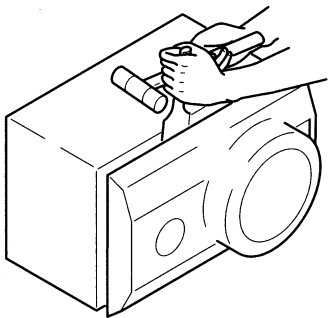


Fig-3

How to Attach the PANEL, FR

Attach the PANEL, FR to the PANEL, SPKR. Tap the four corners of the PANEL, FR with the plastic hammer to fit the PANEL, FR into the PANEL, SPKR completely.

SPEAKER PARTS LIST SX-WZL500 (YLSL,YLSC,YUSL,YUSC)

If can't understand for Description please kindly refer to " REFERENCE NAME LIST ".

REF.NO.	PART NO.	KANRI NO.	DESCRIPTION
1	8A-MS5-001-010		PANEL,FR
2	8A-MS5-002-010		GRILLE,FRAME ASSY A
3	8A-MS5-005-010		GRILLE,FRAME ASSY B <EXCEPT YLSC>
4	8A-MS5-602-010		SPKR,W 200
5	8A-MS5-604-010		SPKR,M 120
6	88-MS1-608-010		SPKR,CERAMIC
7	88-NS3-605-010		CAP,
8	88-MS1-610-010		CORD,SPKR
9	88-NS5-611-010		CORD,SPKR B/L
10	8A-MS5-013-010		CORD,PACKING

ACCESSORIES / PACKAGE LIST

If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	8A-MA5-902-010	IB,LH (ESP)	M<LH>
1	8A-MA5-903-010	IB,U (ESF)	M<U>
2	8Z-NF9-701-210	RC UNIT,ZAS02	
3	87-043-115-010	ANT,FEEDER FM	
4	87-A90-030-010	ANT,LOOP AM-NC C	
 5	87-099-789-010	PLUG,ADPTR IR44<LH>	

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